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“One of the cases that Stanley took with him was almost entirely stocked with McKesson & Robbins’ pills. These goods kept exceedingly well, and answered all requirements admirably.”—“The Chemist and Druggist,” Aug. 23, page 249.

LONDON, August 16, 1890.

DEAR SIR,

Knowing that you have seen the Medicine Chest which was carried by Surgeon PARKE through Africa, we send you herewith some Pills which we have taken from regular stock, and ask you to kindly compare them with the condition and quality of the Pills obtained from the Stanley Medicine Chest.

Yours very truly,

McKESSON & ROBBINS.

Per W. J. E.

Mr. H. HELBING, F.C.S.

H. HELBING, F.C.S.,
ANALYTICAL AND CONSULTING
CHEMIST.

63 QUEEN VICTORIA STREET,

LONDON, E.C., 28 AUG., 1890.

DEAR SIRS,

I have carefully examined the McKesson & Robbins’ Capsuled Pills contained in the Medicine Chest used by Surgeon PARKE during the recent Stanley Expedition, and am able to state that the contents of the Pills, in spite of the severe climatic changes, were in quite as perfect a condition as the McKesson & Robbins’ Capsuled Pills which I have recently obtained from you, and in the regular way.

Yours truly,

H. HELBING, F.C.S.

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Seven of these passed at their first attempt.

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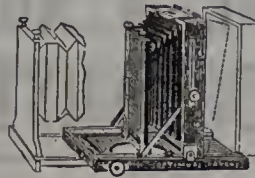
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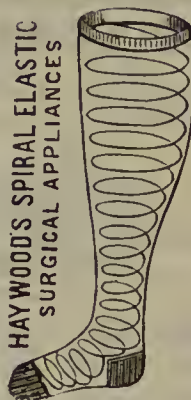
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EXCHANGE COLUMN ADVERTISEMENTS will appear on page 10 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the next issue.

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WANTED, gentleman with moderate capital to join another in opening a Drug Store in a populous town, where a large trade may be done and a good income realised by a suitable man. Address, "Chemist," care of Mr. Scannell, 153 Fleet Street, E.C.

APPRENTICESHIPS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, immediately, 2 Apprentices; passed Preliminary preferred. Rainey, Chemist, Spilshy.

WANTED, a smart youth as Apprentice, where a thorough knowledge of the business will be given. Apply, T. Richards, Pharmaceutical Chemist, Treherbert, Glam.

WANTED, to place a youth (aged 17, tall, with good address) with a Chemist doing a good business, for a period of three years; he has passed the London Matriculation Examination (first division). Terms and particulars, care of Mr. Fred. Bird, Chemist, Coventry.

TO LET.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

SHOP, double-fronted, commanding position; rare chance for Chemist, &c.; situated 144 St. John's Hill, Clapham Junction. Apply, Mr. Charles Fruen, 4 Queen Street Place, E.C.

DISPENSARY, good opening for, in thickly-populated locality near the Lord Nelson, Old Kent Road; rent only £32 per annum. Apply, Mr. Charles Fruen, 4 Queen Street Place, E.C.

TO CHEMISTS, Capital Shop, Paddington, to Let; very suitable front; good opening; large lettable house in good repair; low rent; no premium. Cards to view of Messrs. Flood, 8 Westbourne Grove, W.

SHOP, Hackney Station, noble double fronted corner; private entrance; good residence, in first-rate order; well adapted for Chemist; very low rent, £45, or to be sold on most advantageous terms. Apply, Mr. Charles Fruen, 4 Queen Street Place, E.C.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

IMPROVER: indoors; steady and trustworthy; time allowed for study. E. Faul, Warrington.

ASSISTANT (unqualified) for Mixed Country business; indoors; no Sunday duty. Usual particulars and carte, "B," care of Wyleys, Coventry.

TRAVELLER, calling on Chemists and Druggists in the country, can hear of a first-class Commission. Address, C. D., Horncastle's, Cheapside, London.

QUALIFIED Assistant; outdoors; must be well up in Dispensing, and have good references. Apply, with particulars, Butcher & Pattison, Chemists, Chichester.

DISPENSER; outdoors; must have passed Minor and possess good references; hours 9 to 6.30. T. P., care of Maw, Son & Thompson, Aldersgate Street, E.C.

JUNIOR Assistant for Light Country Retail and Dispensing; short hours. Apply, stating age, previous experience, height, and salary required, to C. B. Shaker, Launceston.

J. W. LASHAM, Pharmaceutical Chemist, Romford, requires at once a gentlemanly Junior (indoors) for Mixed Country business; good Dispenser and Tooth Extractor.

WANTED, young man for Mixed business; must be able to Prescribe and Extract Teeth, also willing to do any work in connection with Oil and Drysaltery. Address, Barlow, Chemist, Oldham.

WANTED, by firm of Wholesale Druggists, experienced and active Traveller, who has connection amongst grocers in Lancashire; abstainer, and who could give security if required. Address, X. Y. Z., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, a Junior Assistant, used to a Country business; half-day holiday allowed weekly, and no Sunday duty. Apply, J. Butterworth, Chemist, Oswaldtwistle, near Accrington, stating age, references, salary required, &c.

WANTED, immediately, an Assistant, accustomed to General Retail and Dispensing business; hours 8 to 7, Saturdays 10. Apply, with references, stating age and salary required, to Mason, Chemist, Broms-grove, Worcestershire.

WANTED, respectable and efficient Agents for the sale of Glucose, Caramel, Farina, Dextrine, Gums and Drugs, to wholesale firms and manufacturers. Write to C. F. (918), Deacons Advertising Offices, Londenhall Street, E.C.

WANTED, at once, to proceed to South Africa under three years' engagement, an Assistant, not over 25, holding Minor qualification, with suitable references. Apply, by letter only, C. T., B. G. Lennon & Co., 14 Bunhill Row, London, E.C.

WANTED, qualified Chemist and Druggist as Manager for small Country business; furnished residence; salary and commission; knowledge of cattle medicines indispensable. Apply, "Zeta," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MALTA.—Assistant required immediately, who has had good experience, and is qualified; salary, first year, £75; second year, £80; third year, £95; board out, but live in house; passage paid there and back, conditionally. For further particulars, apply to "Malta," Messrs. Evans, Lescher & Webb, 60 Bartholomew Close, London.

ASSISTANT, accustomed to good-class country Retail; age 20 to 22; reliable and good address; hours 8 to 8, no Sunday work; good references indispensable; abstainer and member of Christian Church preferred; if required, time for study arranged. Send photo (returned) age, height, experience, salary, and references, Tame, Chemist, Thame, Oxon.

FOR South Coast, a Junior in a Light Retail and Dispensing Business. State age, height, salary, and full particulars to G., 29 South Molton Street, W.

WANTED, the middle of September, an Assistant; about 23; indoors. Send full particulars, and state salary required, E. Whaley, Kingston-on-Thames.

WANTED, good Junior, about 22 years of age; must be quick and accurate dispenser. Apply, with full particulars, enclosing carte, to R. Wainsley, 20 George Street, Hastings.

JUNIOR or Improver wanted for Light Retail; time for reading. State full particulars, salary required, and references, when disengaged, "Chemist," 76 Lozels Road, Birmingham.

JUNIOR; part time, in return for board and lodging; good references. Apply, with full particulars, to Bunker, Chemist, 155 Great Dover Street, Borough, S.E., close to Wills' and Muter's schools.

A COMPETENT Assistant; qualified, and of good address; capable of taking management of a good-class Dispensing Business. Apply, stating salary, height, age, &c., F. H. Davis, Chemist, Thornton Heath.

ACTIVE and industrious Assistant, for putting up Stock on a large scale; one used to Laboratory work preferred; hours 8 to 8; outdoors; no Sunday duty. Apply to the Chemist, Harrod's Stores (Limited), Brompton Road, S.W.

WANTED, an energetic young man, who must be well up to his business, for branch or principal establishment. Apply, stating age, salary required, and references, E. C. Ashford, 32 Gold Street and 27 Horse Market, Northampton.

EARLY in September, qualified Assistant, about 23 years of age; thoroughly experienced in good-class business, especially Dispensing. Apply, stating age, height, salary required, &c., H. C. Parkes, the Church Road Pharmacy, Weston-super-Mare.

IMPROVER or Junior, in a good General Retail; good opportunity for study with a fellow assistant for Preliminary; time to attend class allowed; porter kept. Address, with every necessary particular, and salary required, to Fred. Gibson, Gooch Street, Birmingham.

C. F. LOGGIN is in immediate want of a qualified man (outdoors); send photo (to be returned), also state age, height, and usual particulars; easy hours; alternate night duty; another assistant kept; splendid opportunity for a man just through his Minor. "Chemist," Stratford-on-Avon.

IMMEDIATELY.—A permanent qualified Manager, for Yorkshire; must be a good Prescriber and Tooth-extractor; a total abstainer preferred; send photo and particulars, including age, height, reference, and salary required (outdoors), to "Denture," care of Messrs. Evans, Sons & Co., Hanover Street, Liverpool.

IMMEDIATELY, an active Assistant (indoors) for Mixed business; competent to Dispense, Prescribe, and Extract Teeth; of good address and agreeable manners; capable of managing during absence of principal; one desiring a permanency preferred. Send full particulars, with photo (to be returned), to A. Smith, 5 High Street, Newport, Mon.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

JUNIOR Assistant; good references. James, 63 Worcester Street, Stourbridge.

YOUNG MAN seeks situation; wholesale preferred. E. P., 26 St. Clement's, Oxford.

LOCUM-TENENS, by day, week, or month. Particulars of "Locum," Chemist, Llanudno.

AS Junior; aged 21; outdoors; London; good references and experience. Hill, 7 Jeff Road, Brktou.

ASSISTANT (21); 6 years' experience; good reference; wholesale or retail. Clapham, Thorne, Doncaster.

EVENING EMPLOYMENT with Chemist, Surgeon, or Dispensary. "Minor," 18 Merrick Square, Borough.

AS Surgeon's Dispenser, or evening employment (outdoors). "Radix," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR (outdoors); aged 18; 1 year's experience; moderate salary; near City preferred. "Junior," 412 Hackney Road, N.E.

AS Temporary or Manager; middle-aged; Chemist and Dentist; disengaged; good references. "Medicus," 217 Bathurst Green Road, E.

ASSISTANT and Traveller, or either (39); 16 years' experience, besides 9 years as Traveller. George Norris, Holmfirth, Yorkshire.

SITUATION, with time for study and lectures; near Wills' preferred; good experience and references. Frank R. Franks, Rowde, Devizes.

MANAGER (of Branch preferred), in or near London: Minor, thoroughly experienced; good appearance. "Luteum." Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

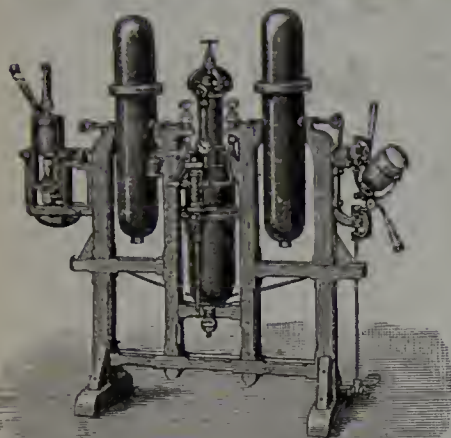
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If you have no surplus stock to Advertise just now, keep this Form for future use.

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INDISPENSABLE TO CHEMISTS.
THE ONLY PRACTICAL SODA WATER MACHINE.
 Self-working by Chemical Action. No Skilled Labour.
 NOT LIABLE TO GET OUT OF ORDER OR NEED REPAIRS.
Produces the Purest Aërated Water made.

Machines, in two sizes, at 25 guineas and 30 guineas. All complete. With the smaller a lad can make easily in ten hours twenty dozen Syphons or 100 dozen Bottles; with the larger, thirty dozen Syphons or 175 dozen bottles.

COUNTY LABORATORY, 30 BROWNLOW STREET, LIVERPOOL, October, 1889.
 I have examined during the present year the Machines for making Aërated Waters invented by Mr. Lozé, and I have formed a very high opinion of them. No lead is found in any part which comes in contact with the water, and the process is one which produces absolutely pure Carbonic Gas. Accordingly I find that the effervescing water produced is free from every injurious metal or contamination, and has a better flavour than that produced in the ordinary way.
 J. CAMPBELL BROWN, D.Sc.

CHEMICAL LABORATORY, 20 ALBERT GATE, MANCHESTER, 21st August, 1889.
 GENTLEMEN,—At your request I have visited the works of Messrs. A. Lozé & Co., of Prescott Street and Tuebrook, Liverpool. I have inspected his patented Apparatus for producing Aërated Waters, and have analysed the Aërated drinks manufactured. The results of analysis quite justified the inferences which were drawn from a knowledge of the materials used. Thus, instead of using ordinary whiting (as the source of carbonic acid gas), which gives off small quantities of offensive gases when acted upon with acid, Mr. Lozé uses one of the pure soluble bicarbonates of either Potash or Soda; the use of this salt enables the apparatus to be much simplified in form, as no gas washer is required, but the carbonic acid gas may be led at once into the liquid in the Saturating Cylinders. The Aërated drinks produced are of very high quality, both as to purity and as to Aëration, and the apparatus possesses the merit of extreme simplicity and efficiency.—Faithfully yours,
 C. ESTCOURT, F.I.C., F.I.

Messrs. A. LOZÉ, & CO., LIMITED.

Dear Mr. Lozé,—I am pleased to inform you that I have been able to work the Machine sold to me by you without previous knowledge. With your patent Turnover I can bottle Patent Stoppers at the rate of two dozen per minute. Syphons and Corked Bottles I can fill much quicker than what you advertise the Machine to do.

The Aërated Waters produced have been sampled by a number of gentlemen, and pronounced by them to be of a most excellent quality.—Wishing you every success, I remain, yours truly,
 ROBT. J. GOW, F.C.S.

DITTON, 10th April, 1890.

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DE CARLE'S SOLID FRUIT JUICES

A TRIAL,

But send at once 10/6, and have a 3-doz. Case to retail at 4½d. per Packet, assorted flavours, viz., Lemon, Orange, Raspberry, Pineapple, Cherry, Lime Fruit, Ginger, &c., together with an abundant supply of Handbills, a Show-card in seven colours Free, and Samples for counter distribution, **Carriage Paid** to any address in the United Kingdom, on receipt of Postal Order for 10/6.

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From whom Samples, Prices, and full particulars can be obtained.

Obtainable through all London Houses; also EVANS, GADD & CO., EXETER; FOGGITT, THIRSK, &c., &c.

SODA-WATER MAKING

With Liquefied (So-called Natural) Carbonic Acid Gas.

The "Compact" Machines are designed where space is an object and for those having a large retail trade, such as Chemists, &c., for filling Bottles or Syphons, and are fitted on the one end with either the "Reliance" Syphon Filler or the "Excelsior" Machine for filling Patent Bottles.

No. 1 Size "Compact" Soda-water Machine complete, as shown, comprises a Niagara Cylinder, mounted, complete with all fittings, Reducing Valve, and a Bottling Machine for Syphon Bottles or for Patent Bottles, the latter fitted with Syrup Pump, the whole mounted on a massive cast-iron frame, fitted with shaft, flywheel, with fast and loose pulleys, for steam or other power, and also handle for hand-power.

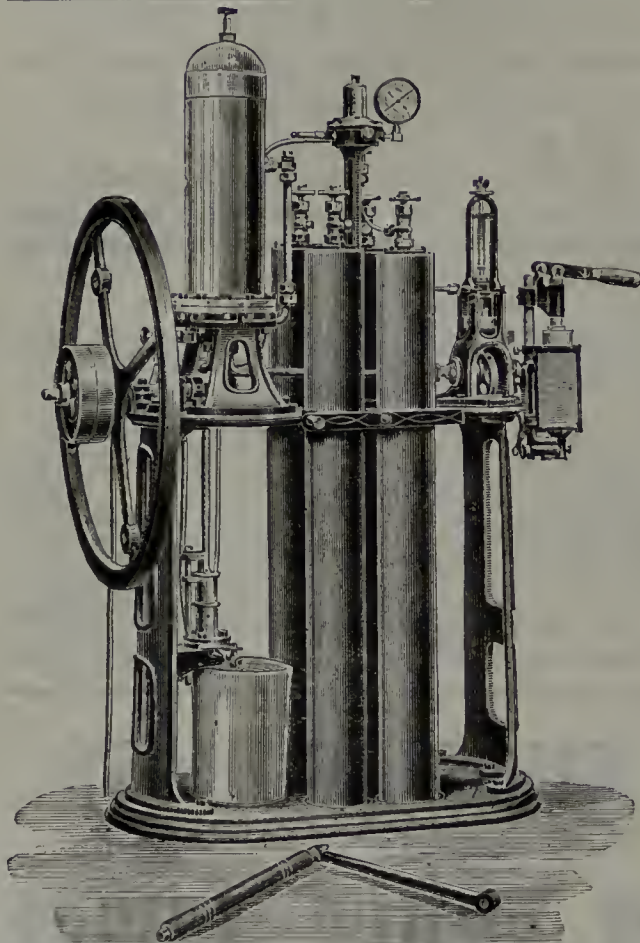
By opening one of the iron vessels, and setting the Reducing Valve to the required pressure, a stream of gas is let into the Cylinder; pumping the water into the Cylinder by means of the flywheel may then be commenced, and as soon as it shows in the Water Gauge, bottling may be started, and continued while the water pump is being worked. About 50 dozen bottles per hour can be bottled with ease by hand-power.

Price complete, **£60.**

No. 2 Size ditto ditto, with a producing capacity of 25 dozen bottles per hour—

Price complete, **£40.**

LIQUEFIED CARBONIC ACID GAS, in iron vessels containing 28 lbs., which is sufficient to aerate 20 gross of waters, or 3,000 to 4,000 draughts from the Pillar Fountain, as shown below, **10/-** each.



Specimens of Testimonials we are receiving from users of the 'Compact' Machine.

From A. THOMPSON, Esq., M.P.S.,
The Putney Drug Stores, 58 High St., Putney, S.W.

"I am more than satisfied with the No. 1 'Compact' Machine which answers my utmost requirements. I find with the aid of a youth I can fill six dozen syphons per hour, including syringing. I have nearly trebled my sale this last three weeks."

From E. H. TAYLOR, Esq.,
Middle Abbey Street, Dublin.

"The No. 2 'Compact' Soda Water Machine came to hand the day previous to the Great Annual Temperance Fête at Ball's Bridge, where it had an engagement to supply 15,000 visitors, or over 200 dozen of waters. I felt nervous, not having a knowledge of the machinery. However, I got it together without a hitch, and after two dozen being bottled, I cannot describe the weight I got from under. I saw that we could turn out double the quantity, as even with temporary fixing, it filled 42 dozen per hour, and with a better trained attendant, will, I am sure, go close on fifty. I wired you this afternoon to know when you can deliver another No. 2 Machine, for a party who came a distance to see it work to-day. Congratulating you on your success."

From Messrs. TURNER, SCHON & CO.,
101 Lendenhall Street, E.C.

"We thought we should have great difficulty in the manufacture of aerated waters to which we were absolute strangers. Now that your No. 1 'Compact' Machine is fitted up and we have had an opportunity of working it, we find it is simplicity itself, and are surprised it should be possible to put such an effective and complete machine into such small compass. We think the machine will prove a great success, and we shall be happy to show it to intending purchasers."

PILLAR FOUNTAIN.

For a Single Draught Arm fixed on Counter, as shown by this drawing, there is nothing more convenient, the great advantage of it is, that a small sharp stream of Aerated Water can be drawn, which, when Syrups are taken, is absolutely necessary, so as to mix up the Syrup with the Water first, and then a large stream, as in the emptying of a bottle of soda water can be drawn; where soda water alone is required, the latter retains its sharpness and pungency, and thus, by the use of this Draught Arm, there is no necessity of drawing the soda water into a bottle first, and then emptying it into a tumbler, thus is avoided the loss of gas, and also the loss of time; but by drawing direct into the drinking glass a more satisfactory result is obtained. It is of very solid construction and thickly plated.

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Besides GOLD & SILVER Medals, these Essences have obtained the HIGHEST TESTIMONIALS from all the Medical Journals & from the Principal Trade Journals in this & other Countries.

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LEMON-RASPBERRY is unrivalled for use with Mineral Waters.

LEMON-RASPBERRY is bottled in special bottles, and is attractive in appearance and agreeable in flavour.

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EXCHANGE COLUMN.

This Section of "The Chemist and Druggist" must be closed for press by Thursday noon of each week. Remittances payable to EDWARD HALSE.

TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of $\frac{1}{2}$ d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.," and the signs must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us, accompanied by a commission of 6d. if the amount is £3 or under; and 1s. if over that sum. We acknowledge receipt of deposit to both parties, and hold the money until we are satisfied that either the goods are returned to their original owner or the purchase is completed.

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Drugs and Chemicals.

Morphia acetate, Macfarlane's 1 oz. bottles, 5s. 3d. Eardley, Chemist, Sheffield.
About 15l. worth going drugs, patents, and sundries; what cash offers for part or whole? list sent. 167/8.

Literature.

Martindale's "Extra Pharmacopœia," several years' *Chemist and Druggist*, "Amateur Photographer." "Chemist," 116 Deunmark Hill, S.E.

What offers for *Pharmaceutical Journal* from July, 1880, to December, 1889 (missing, February 4, 1882, March 13, 20, 1886), *Chemist and Druggist* from November, 1882, to December, 1889 (missing, December 4, 11, 18, 1886, January 18, 1887, January 26 1889); unbound? Evans & Son, Biggleswade.

Major text-books, splendid condition; Atfield's "Chemistry," Watts's "Organic and Inorganic," Thorp's "Metals," Remson's "Chemistry," Ganot's "Physics," Prantl's "Botany," Willis's "Advanced Materia Medica," Muter's "Analytical Chemistry," Bentley's "Botany." Gray, 37 Trinity Square, S.E.

Formulæ.

Brooks's Recipes.—Depurative saline, perfectly soluble, 10d. lb.; "Sweet Memories," new invigorating bouquet; oatmeal and white rose lotion, specialty for seaside, cooling and purifying; tic specific, magic cure, instant action, very reliable; recipes, with instructions, post free 7d. each, 3 for 1s. 6d.; list of 400 free. Tom Brooks, Chemist, Hornsey, N.

Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

Something new.—Sweet solid perfumes.—Enchanting, delicious odours, everlasting, entirely unique, easily made, "Floral Bouquet," "Moss Roses," "Heliotrope and Musk," "Old English Lavender," "Carbolyptol," for preventing contagion; "Camphoresum," destroys moths, fleas, &c.; these retail 2d. The six recipes, with full instructions, and two samples of each, post free, 5s. Tom Brooks, Chemist, Hornsey, N.

Shop Fittings.

Half-gallon tincture-press, as Maw's Fig. 20, good as new, 7s. 6d. Green, Chemist, Swindon.

Dispensing-screens, nests of drawers, desk and case, wall-cases, sponge-cases, carbons, and everything suitable for chemists; great bargains. Philip Josephs, 54 Old Street, Goswell Road, London.

Second-hand shop-fittings, show-cases, shop-rounds, specie-jars, carbons, pill-machines, utensils, and every necessary for chemists commencing or fitting up branch shops, at half the usual prices; state requirements or call. Natali & Co., 184 Aldersgate Street, London, nearly opposite Maw's.

Miscellaneous.

Pair crutches, Maw's No. 3, almost new; what offers? 165/10.

Surplus stock, good condition, sale or exchange. Hulme, Chemist, Fenton, Staffordshire.

Few cwt. glycerine, pure 1'260, carriage paid, 62/6. Parker & Co., South Wigston, Leicester.

A No. 4 Bracher's copper still, used four times only; cost 3l. 15s., take 2l. Cuthbert, Huddersfield.

Jubilee envelopes, with cards, for disposal, unsoiled. Offers to Pratt, care of Mrs. Janes, Beaudesert, Leighton Buzzard.

700 empty vaseline and other tins, various sizes; must be cleared next week; best price per 100 accepted. Fmth, Chemist, Gosport.

Bottles and jars sufficient for small shop; mortars, scales, pill-machine, &c.; also small lot of drugs and homœopathic medicines. Staley, Chemist, Burton-on-Trent.

Job lots of mineral-water and other bottles; 100 gross split lemons; 50 gross 10-oz. square dark coffee extracts; 30 gross cherry handy quarts; what offers to clear? 85/61.

Upright glass case in two sections; total height 7 ft. 3 in., width 4 ft. 9 in., depth 9 in. and 13½ in.; 4 glazed doors, suitable for packed goods or make fins hookcase; price only 3l. Floyd, Bury-St.-Edmunds.

Wright's ventilating gas stove, cost 35s., 15s.; Wright's radiating ditto, cost 32s., 15s.; brass counter scales, fig. 1, to weigh up to 4 lbs., without drawer, 30s.; brass counter scales, fig. 5, up to 7 lbs., 25s.; all in thorough repair. Francis E. Rookledge, Easingwold.

Aquarium, plate-glass, 30 by 20 inches at base; case of 40 new superior large Mediterranean honeycomb bath sponges, cost 7l.; Hahne-mann's head; Viking essence of beef, real turtle soup, &c.; splendid model of British lion, opens mouth, turns head, &c., great window attraction, cost 3l.; 1 dozen glass fairy lamps, assorted colours. Onion, Chemist, Villa Road, Handsworth, Birmingham.

WANTED.

Plate-glass window-stands; state size and price. Herington, Leighton Buzzard.

Shop-fittings, &c.—All descriptions purchased for cash. Natali, 184 Aldersgate Street, E.C.

EDUCATIONAL.

THE CHEMIST AND DRUGGIST of SEPTEMBER 20th, 1890, will contain full details of Pharmaceutical, Medical, Scientific, Veterinary, and Dental Educational Requirements and Curricula. This is the only publication of the kind specially prepared for Pharmaceutical readers, and the occasion is excellently suited for advertisements of Technical Schools, Educational Books, Scientific Apparatus, &c. For particulars apply to the PUBLISHER, 42 CANNON STREET, LONDON, E.C.

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THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1866, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

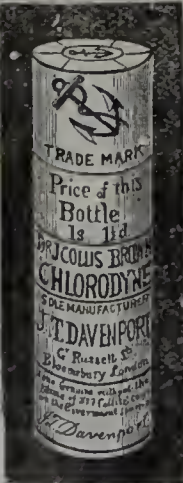
The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND



ONLY GENUINE

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

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Allen, Hanbury & Co.,	"	Gale & Co.,	London	Newbery & Sons,	London
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After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

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We are pleased to be able to testify that your Phospho-Citric Acid is satisfactory under the most severe trials. We have placed Manufactured goods in which your Acid was used in a refrigerator for months, and also for nine months in a stove in which the temperature stands at over 150° day and night, and the bottles when examined to-day were as bright as the day they were put in.

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I have pleasure in bearing testimony to the fact that first-class waters are produced, with greater body and finer fruity flavour, at half the cost of Citric; and further that your Acid is free from all traces of LEAD, generally found in the crystals.

I am persuaded that your Acid will ultimately command the Mineral Water Trade.

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When Fermentation is present, Saccharine Beverages made with this Acid will keep sound and bright several days longer than those made with Crystal Acids.

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For the production of Botanic Beer, a non-intoxicating beverage, full of body and flavour, with a creamy head like Bottled Ale. The most perfect substitute for Alcoholic Drinks ever discovered for either Summer or Winter.

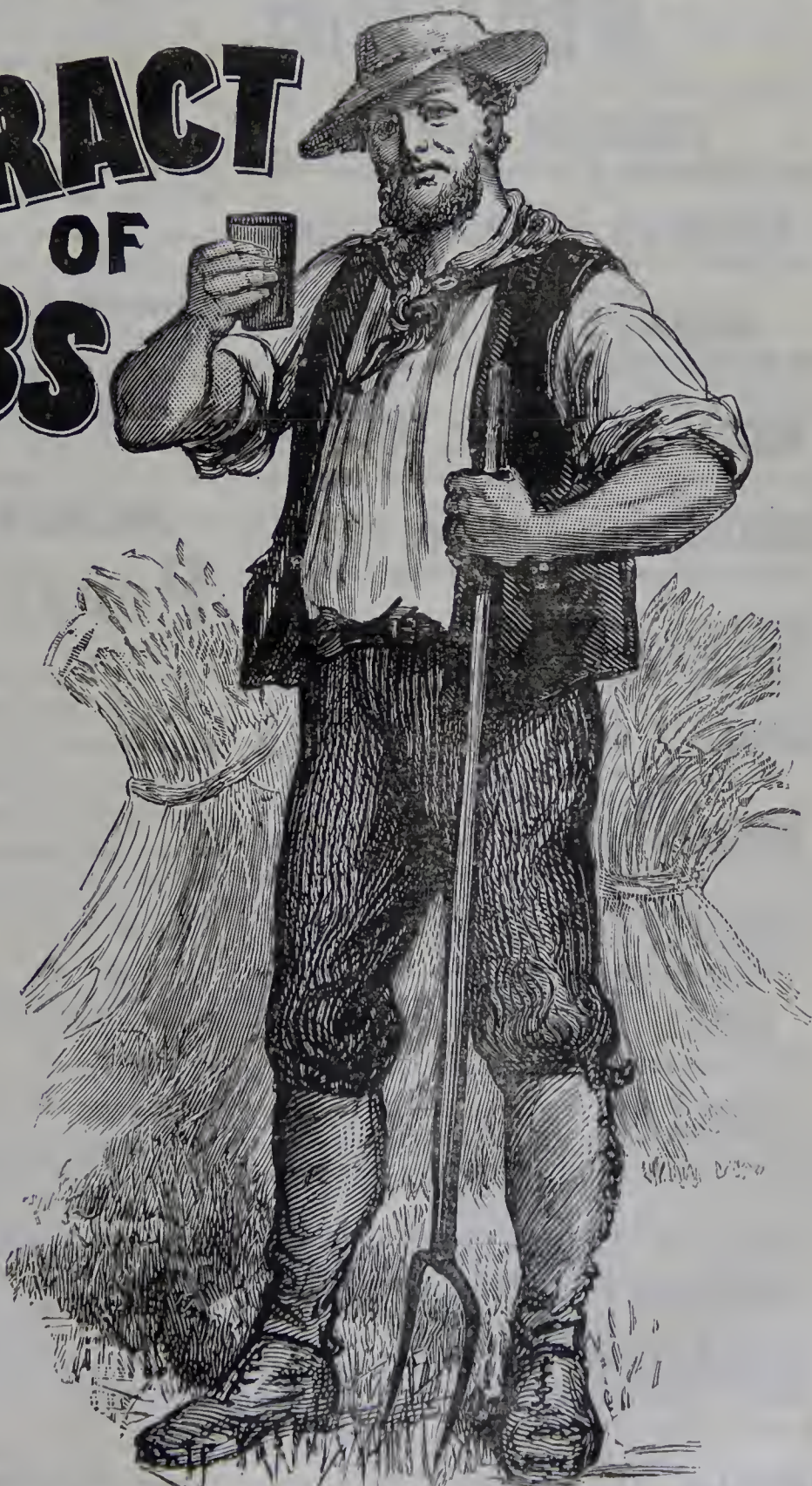
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Eight bottles sent carriage free to any part of the Kingdom.

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A palatable and convenient mode of administering Malt and the Hypophosphites.

The Biscuits contain 75 per cent. of Malt Flour to 25 per cent. prepared Wheaten Flour, and each Biscuit contains half a grain of the combined Hypophosphites of Lime, Potass, and Soda, thus rendering it an admirable tonic and nutritive Food, eminently adapted for those cases in which Malt and the Hypophosphites are specially indicated.

In Tins, 1s. 6d. and 3s. each; Trade Price, 15s. and 30s. dozen,
From the Patent Medicine Houses, or from the Patentees and Manufacturers,

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Highly recommended in various forms of dyspepsia, having a direct action upon the mucous membrane of the stomach and intestines as a sedative. It can be administered with marked and almost instantaneous effect in the irritative form of dyspepsia more especially when *pyrosis* is a conspicuous symptom, and pain occurs an hour or more after food. In simple neuralgic gastric pain following eating, occurring in feeble subjects, it is especially indicated, and even in *carcinoma* it has been used with great success in alleviating pain and vomiting.

In the dyspepsia of patients dependent upon some organic disease, and where there is a decided loss of nerve power, it is of singular service. Thus, for instance, a person after a meal complains of a peculiar gnawing and emptiness, with slight pain at the epigastrium, evident signs of general relaxation and loss of nerve power, clinical experience has shown that it is of great service as a tonic and stomachic. A portion of its value arises, it may be, from its action upon the spinal motor nerve centres. Be these things as they may, experience has abundantly demonstrated the value of the compound as a stomachic, anti-dyspeptic, and tonic, in general functional atony and relaxation, and in the various forms of dyspepsia, constipation, or diarrhoea, connected with atony of the visceral muscular coat, the Mist. Pepsinæ Co. c. Bismutho is a very valuable remedy. In the *exhausting purging of Phthisis*, accompanied with night sweats and restlessness, Dr. MATHEWS, of Nantwich, has used it with marked and appreciable effect.

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Packed (for Dispensing only) in 10-oz., 22-oz., 40-oz., and 80-oz. Bottles.

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"This combination of Messrs. HEWLETT is one which has been extensively tested, and with good results. It is justly popular in the profession as a very valuable and effective combination. It serves not only to improve aepsia, but to lessen the gastric pain and to facilitate difficult and painful digestion, without setting up any evils of its own. It is a very good crutch for persons of weak stomach to lean on."—January 15th, 1881.

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MILD DRINKS.

Cherry. Raspberry.
Strawberry. Limb Fruit
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Pineapple.
Raspberry Vinegar.
Orange and Quinine.

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Gingerette. Ginger Lemon
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Lime Fruit Cordial.
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"First-class beverages."—*The Grocer*.
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Price Lists, Testimonials, and other information sent post free on application to the Manufacturer—W. BECKETT, Heywood, Manchester
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J. Sanger & Sons, 489 Oxford Street; J. Woolley, Sons & Co., Manchester; Goodall, Backhouse & Co., Leeds.

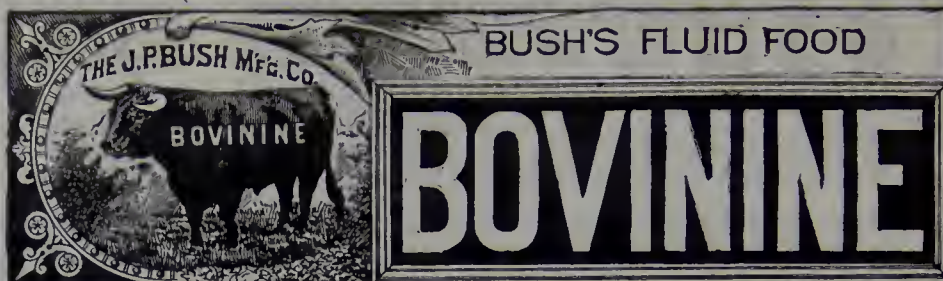
THE FIRST RAW FOOD EXTRACT.

(Introduced to the Medical Profession in 1878.)

AN IDEAL FOOD.

PALATABLE.

KEEPS
PERFECTLY.



BUSH'S FLUID FOOD

CONTAINING
20 PER CENT
OF
COAGULABLE
ALBUMEN.

THE VITAL PRINCIPLES OF BEEF CONCENTRATED.

BOVININE consists of the juices of lean raw beef obtained by a mechanical process, neither heat nor acid being used in its preparation. The nutritious elements of lean raw beef are thus presented in a concentrated solution, no disintegration or destruction of the albumen having taken place. The proteids in solution amount to twenty per cent. of the weight of the preparation, and give to it the great dietetic value it possesses in all conditions where a concentrated and readily assimilable food is needed.

BOVININE is entirely distinct from the numberless meat preparations prepared with heat. It is a Food, pure and simple, **Highly Concentrated**, and the most **Nutritious** yet presented.

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BOVININE has been prescribed and enthusiastically endorsed by thousands of Physicians and Surgeons in the United States and Canada for the past **Twelve Years**. We are systematically introducing **BOVININE** to the notice of the Medical Profession of Great Britain, and many are prescribing it daily. It is sold at prices within the reach of all.

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Contains 25% of Allen & Hanburys' Extract of Malt.

A NOVEL CONFECTION. MOST SALEABLE.

Delicious Flavour. Brilliant & Attractive Appearance.

SELLS AT SIGHT.

Vide Dr. Tanner's Report, and The Chemist and Druggist, April 20th.

1/ Bottles, 9/ per doz.; 1-lb. Bottles, 20/ per doz.; and in 4-lb. Jars, 1/6 per lb.

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REPRINT FROM "THE HOSPITAL GAZETTE."

ALBUMINOIDS IN MEAT ESSENCES

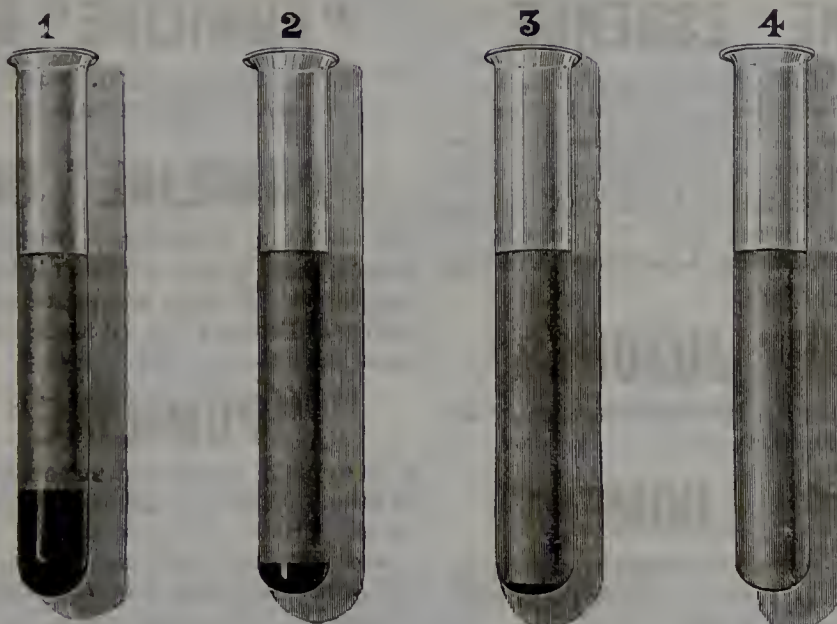
By V. H. WYATT WINGRAVE, M.R.C.S. Eng., L.S.A. Lond., Lecturer on Physiology at Cooke's School of Anatomy & Physiology.

With the object of demonstrating the comparative amount of natural unchanged albuminoids contained in some of the chief preparations of concentrated fluid meat essences now in use, the following simple method was adopted, and which the appended illustrations faithfully demonstrate.

No. 1 is Caffyn's Liquor Carnis; 2, 3 and 4 are other well-known meat preparations.

CAFFYN'S
LIQUOR CARNIS.

HEAT ALONE.



The four *upper* tubes represent thirty grains of the respective preparations diluted with ninety minims of distilled water, boiled for three minutes, and allowed to stand for six hours.



HEAT & NITRIC ACID.

The four *lower* tubes represent similar materials and proportions, boiled for three minutes, after the addition of ten minims of pure nitric acid.

From this demonstration it is evident that Caffyn's Liquor Carnis contains a much greater proportion of *pure, unchanged albuminoids* than any of the other preparations; 3 and 4 giving almost negative results, the process of manufacture having *entirely changed or destroyed* them.

Pharmacists willing to distribute specimen bottles and literature to Medical Men will oblige by intimating the same to us and sending List of Medicos, with Addresses.

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Is a specially prepared volatile essence, distilled from a particular variety of pine, growing nearest the snow level on the Alps. It possesses exceptional medicinal properties when given internally, or in the form of inhalations, in the treatment of Pulmonary and Diathetic Affections, such as Phthisis, Rheumatism, Gout, &c. It is a valuable deodorizer and disinfectant, and has a peculiarly refreshing and fragrant odour.

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For Sore Throat, Cough, Hoarseness, &c., they give immediate relief.

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Specially beneficial for use in Chronic Rheumatism, Gout, Lumbago, Sciatica, &c. It is also invaluable for Throat and Chest Affections, and may be taken internally, in doses of 2 to 5 drops.

"PUMILINE" PLASTER

Is most effective in Chronic and Muscular Rheumatism, Lumbago, Sciatica, and also for Chest Affections.

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For Gout, Rheumatism, and Skin Disease; used in BATHS, Ointments, and Liniments.

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For all Skin Affections, Irritations, Insect Bites Burns, &c. This Ointment is a fine smooth homogeneous application. It gives immediate relief in the intolerable itching of Eczema, &c. It is unrivalled both as a medicinal agent and toilet requisite.

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Is a carefully neutralised superfatted Soap, containing no free alkali, and is a Lubricant instead of a Desiccant to the skin. It is peculiarly adapted for use to the delicate skin of ladies and children. It leaves the skin smooth and satiny, and beautifies the complexion. The "Pumiline Essence" which it contains makes it a powerful disinfectant.

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Most effective and convenient pocket inhaler for use in Throat or Lung Troubles. Is invaluable for use during a fog or mist.

G. & G. STERN have so arranged their Price List that a *very large margin of profit* is left to Chemists and to the Trade generally. In consideration of this, as well as the fact *that no other* Pine Preparations are in any way equal to "PUMILINE," Chemists will find it much to their advantage to stock the "Pumiline" Preparations.

PRICES—

	RETAIL	WHOLESALE.
"PUMILINE" ESSENCE.....	1/6 and 2/6 per bottle.....	15/ and 24/ per dozen.
"PUMILINE" EXTRACT	1/ per bottle.....	9/ per dozen.
"PUMILINE" JUJUBES.....	1/1½ and 2/3 per box	10/6 and 20/ per dozen
"PUMILINE" OINTMENT	1/1½ and 2/9 per pot.....	11/ and 27/ per dozen.
"PUMILINE" LINIMENT	1/1½ and 2/9 per bottle	11/ and 27/ per dozen
"PUMILINE" SOAP...(box of 3 cakes) 1/6 and 9d., and 1/ per tablet.....		15/, 7/6, and 9/ per dozen.
"PUMILINE" PLASTER	1/1½ each	9/ per dozen.
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Will send Show Cards and Literature Free on Application.

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BOTTLE SHAPE.

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BOTTLE SHAPE.

5/9 per Gross.

On $\frac{1}{4}$ -Gross Show Cards, with Elastic. Sample Free.

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TOMLINSON & Co's
CELEBRATED
6d. 6d.
LINCOLN BUTTER POWDER

Sold by Chemists over 35 years.

Takes away all rank tastes from Butter, and prevents it turning RANCID in HOT WEATHER.

STOCKED BY WHOLESALE HOUSES
Boxes, 3d., 6d., 1s., 2s. 6d., and 7s. 6d.

Mint Street Works,
LINCOLN.

THE ONLY PALATABLE NATURAL APERIENT WATER IS

"FRANZ JOSEF"

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"RAMORNIE." LIEBIG'S Extract of Meat.

As supplied to the Admiralty, War, and India Offices.

1-lb. Jars.....	per lb.	6/9	per doz.	81/0	2-oz. Jars.....	per lb.	7/8	per doz.	1/6
1-lb. Jars.....	"	7/0	"	42/0	1-oz. Jars.....	"	8/4	"	6/3
1-lb. Jars.....	"	7/8	"	21/9	1-oz. Jars.....	"	8/8	"	3/3

QUOTATIONS FOR EXTRACT IN "BULK" ON APPLICATION.

Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C.

8 lbs. Carriage Free

THE RELATION OF THE TRADE TO DOCTORS.

*The outcome of a letter in "The Chemist and Druggist,"
July 26, 1890, page 144.*

In response to the general feeling of the Trade, as evinced in the correspondence initiated by the above letter, I beg to append a list of the articles I am now advertising to Doctors, together with Prices to the Medical Profession, in order that the Trade may be in a position to supply the requirements of Medical Men.

TERMS NET CASH.

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JOHN MORGAN RICHARDS.

LACTOPEPTINE.

1-oz. (4/6 size) per dozen, 42/6. Gross and upwards per dozen, 38/- Professional price, 3/9.

UNSTAMPED FOR DISPENSING ONLY. (Cost of Stamp deducted.)

4-oz., each 10/6. Dozen and upwards, each 9/- 8-oz., each 20/6. Dozen and upwards, each 18/-

The small size (1-oz.), retailing at 4/6, is not sold unstamped for dispensing.

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The Medical Press and Circular says:—"A very handy instrument, which fulfils the double purpose of depressing the tongue and serving as an insufflator. . . . The instrument will, we believe, be found very useful for children, in whom there is often much difficulty in properly depressing the tongue, so as to apply pulverised remedies to the pharynx in Diphtheria and other diseases."

Per dozen, 24/- 12 dozen at 21/- Professional price, 2/6.

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For Terms, see Price List, post free on application.

"GLYCONES" (LILLY) or IMPROVED GLYCERINE SUPPOSITORIES.

Contain 95 per cent. pure Glycerine.

(ADULT AND INFANT SIZES.)

In boxes of twelve (2/6 size), per dozen boxes, 18/- 12 dozen boxes at 15/- Either size, Professional price, 1/9 box.

PIL. APHRODISIACA (LILLY), 4/6 size.

Ext. Damiana 2 grs. | Phosphorus 1/10 gr. | Ext. Nux Vomica 1/2 gr.
Per dozen, 40/- 12 dozen at 36/- Professional price, 3/9.

SUCCUS ALTERANS (McDADE), 11/- size.

Per dozen, 108/- 12 dozen less 10 per cent. Professional price, 9/6.

CAULOCOREA, 4/6 size (Emmenagogue, Parturient, Antispasmodic, Diuretic, Tonic).

FORMULA.

Caulophyllum Thalictroides; Viburnum Opulus; Viburnum Prunifolium; Aletris Farinosa; Dioscorea Villosa; Mitchellia Repens; Spts. Aetheris Co.

Per dozen, 40/- 12 dozen at 36/- Professional price, 3/9.

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Liverpool School of Pharmacy
London Homoeopathic and Medical School
London Hospital and Medical School
Manchester College
Owens College
Royal (Dick's) Veterinary College
South London School of Pharmacy, Lim.
The School of Pharmacy
University of Glasgow
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Brady and Hinchliffe, (Ld.)
Dunfort
Evans, Sons and Co.
Fevre, T.
Gerant, E., and Co.
Lynch and Co.
May, Roberts and Co.
Thompson, Walters, Hole and Co. (Limited)

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Fletcher Bros. and Co.
Hamilton and Co.
Wilkin's

SHOP FITTERS

Bowling and Govier
Bygrave, J. and W.
Evans, Sons and Co.
Hewlett, S.
Natali, E. (Show Cases)
Poths, H., and Co.
Treble, G., and Co.
Yates, W. S.

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Bayley and Co.
Blondeau and Co. (Vinolia)
Coblewick Soap Co.
Cook, E., and Co.
Ewan, J., and Sons
Fordham, W. B., & Sons (Ld.)
Lucas and Co.
Pearce Soap
Stern, G. and G.

SPONGE

Cresswell Bros.
Marks, H., and Sons (Ld.)
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Darton, F., and Co.
Perken, Son and Rayment
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Harvey, J. and W., and Co.
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De Luca, G. V.
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Dunfort
Favarger and Co.
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American Toilet Co.
Jewsbury and Brown
Sutton, O., and Co. (Block)
Wilson, A. (Bunter's)
Woods, M. (Arecas)

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Mather and Co.
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URETHANE

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VACCINATION

Vaccine Association (Lymph)

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Brett, F. J.
Crocker, G. B.
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VASELINE

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VERMIN KILLERS

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Steiner and Co.

VINOLIA

(Superfatted Medical and Toilet)
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Coleman and Co. (Meat and Durrant, G. (Orange) Malt.
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Idrie & Co.
Miller, A., and Co.
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BERDOE'S TRIPLE FRENCH PERFUMES



THESE PERFUMES have been known to the trade for many years past, and their steadily increasing sale is the best proof of the appreciation in which they are held. Notwithstanding that the prices of some brands of perfumes have been reduced, F. NEWBERRY & SONS find it both impossible and needless to offer any other advantages to buyers than—(1) the excellent quality of the Perfumes themselves, (2) their price. The object kept in view is not to produce goods which may be sold at a given price and leave a given margin of profit, but to produce such as shall equal or surpass a given standard of quality.

BERDOE'S TRIPLE

In PLAIN STOCK BOTTLES of 20 oz., 10 oz., and 5 oz.

		£ s. d.
Ess. Bouquet	per 20 oz.,	0 8 7
Frangipane	per 10 oz.,	0 4 4
Jasmin	per 5 oz.,	0 2 3
Jockey Club		
Millefleurs		
New Mown Hay		
Opoponax		
Patchouli		
Rondeletia		
Stephanotis		
Ylang Ylang		

The above are the leading Essences, and to these the special attention of customers is asked. Those who desire greater variety will find in "Newberry's Catalogue" a more extended list.

FRENCH ESSENCES.

		£ s. d.
Violets	per 20 oz.,	0 11 3
Wood Violet		
White Rose, 20 oz., 9s. 10d.; 10 oz., 5s. 1d.; 5 oz., 2s. 7d.		
Eau de Cologne	per 20 oz.,	0 4
Lavender Water	" 10 "	0 2 3
	" 5 "	0 1 2

Berdoo's Perfumes, in Handsome Show Bottles for the Counter, Rose Cut Stoppers, Vitrified Opal Shield Labels with Gold Border and Black Letters, from 11s. 6d. each.

Established A.D. 1746.

F. NEWBERRY & SONS,

1 & 3 KING EDWARD STREET, LONDON, E.C.

GARDENIA TOOTH SOAP.



12 boxes on handsome Show Stand, as shown in accompanying illustration.

THIS ARTICLE MAKES A SPLENDID SHOW ON ANY DRUGGIST'S COUNTER.

The Soap is prepared from the very best materials, and is readily bought by Travellers and others, as being the most convenient form for carrying Tooth Soap.

Price **6/-** per Card.

SOLE AGENT:

HENRY C. QUELCH

1 Ludgate Sq., Ludgate Hill,
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BAILEY'S PATENT "RUBBER COMPLEXION" BRUSH.

Retails for 3s. 6d. each.
Price 25s. per dozen.

Used with a little soap in the daily ablutions, the gentle friction of this brush makes the skin beautifully soft and smooth, effectually eradicating all blemishes, blotches, wrinkles, coarse lines, &c., and entirely superseding the poisonous cosmetics and face-washes now in use. It is simply invaluable for bathing the delicate skin of infants and children.

BAILEY'S RUBBER TEETHING RING



Is perfectly tasteless, and so constructed that the flat-ended teeth serve to expand the skin of the gums, softening the latter, and thus aiding the coming tooth without irritation. It is made of pure Para Rubber, and entirely supersedes the old-fashioned and injurious articles sold for this purpose, and is highly recommended by leading Physicians and Dentists.

Retails for 5d. each.
Price 3s. 6d. per dozen.

We are also the Makers of BAILEY'S BATH and PLESH BRUSHES, price 42s. per dozen; RUBBER TOILET BRUSHES, prices 2s. and 17s. per dozen; and RUBBER TOOTH BRUSHES, price 6s. and 6s. 6d. per doz.

Of all Wholesale Houses, or direct from the Manufacturers,

DAVID MOSELEY & SONS,

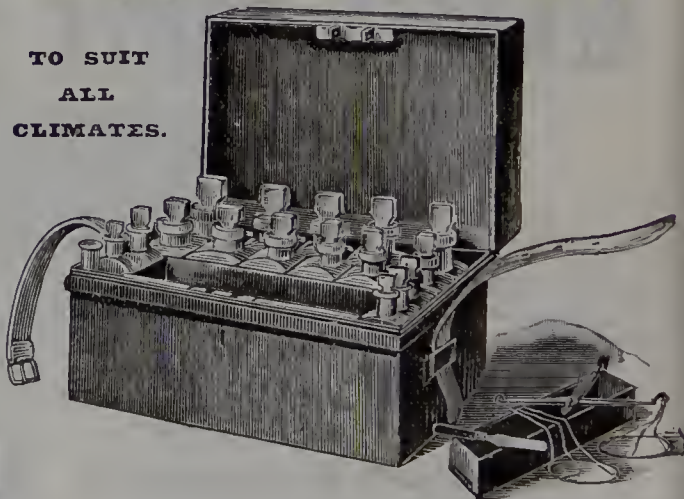
14 Aldermanbury Avenue, LONDON, E.C.

Ardwick, MANCHESTER; and 57 Miller St., GLASGOW.

26

BENTLEY'S COLONIAL MEDICINE CHEST

TO SUIT
ALL
CLIMATES.



The above is made in Black Japanned Tin, size 10x6x5½, fitted with Lock, Key, and Strap; contains 5 4-oz., 6 2-oz., and 5 ½-oz. stoppered bottles, Scales, Knife, and Measure, space for Plaster, &c. Price 16/6.

E. BENTLEY & SON,

Exporters of Bottles, Druggists'
Sundries & Medicine Chests.

14 TABERNACLE STREET, LONDON, E.C.

EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

JOHANN MARIA FARINA,

Opposite the Julichs Place, COLOGNE,

ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867; VIENNA, 1873.

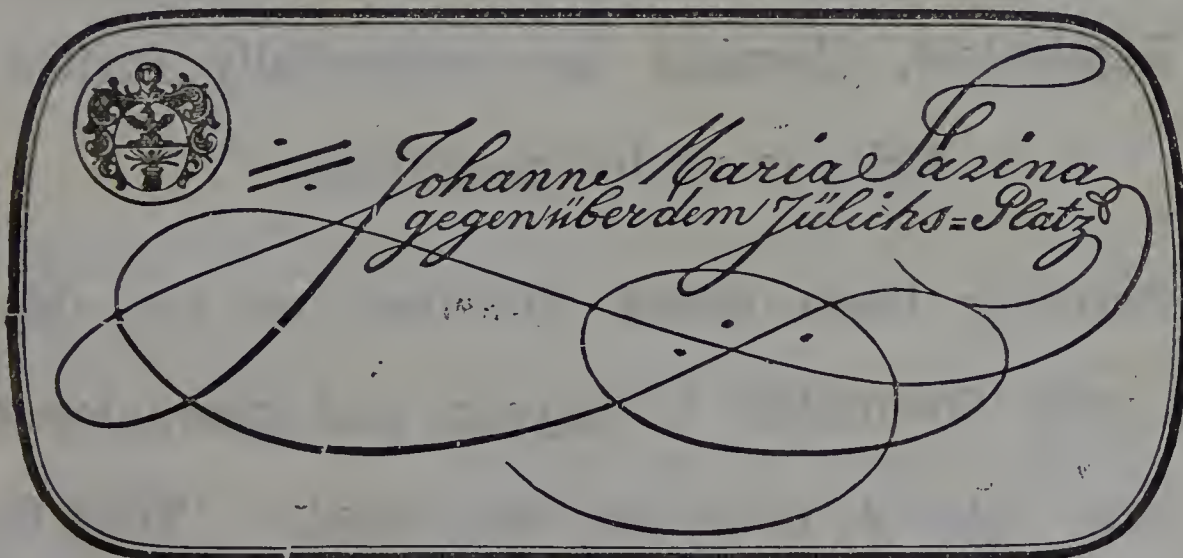
By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales; Albert II., King of Saxony;



Their Majesties, William II., German Emperor and King of Prussia; Alexander II., Emperor of Russia; Francis Joseph, Emperor of Austria; Lewis, King of Portugal.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 13s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

MESSRS. J. & R. McCracken,

No. 38 Queen Street, Cannon Street, London, E.C.

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	—	—	—	—	—	—	12 bottles	} to one dozen.
" 2. Short White Bottles	—	—	—	—	—	—	12 "	
" 3. Double ditto	—	—	—	—	—	—	6 "	
" 4. Wickered Bottles (small)	—	—	—	—	—	—	8 "	
" 5. ditto (medium)	—	—	—	—	—	—	4 "	
" 6. ditto (large)	—	—	—	—	—	—	2 "	

JOHANN MARIA FARINA

OPPOSITE THE JULICHs PLACE.

COLOGNE: January, 1890.

CHEST PROTECTORS

Before placing their season's orders for Chest Protectors and Respirators, Chemists are respectfully invited to write to us for quotations.

Manufacturing these goods ourselves, we are able to quote very favourably to buyers, and guarantee that the best quality materials are used. The Chest Protectors can be had of Red or White Felt and Natural Wool.

THOMPSON, WALTERS, HOLE & CO., LTD.
CURTAIN ROAD, LONDON, E.C.

NOTE REDUCED PRICES OF QUININE PILLS.

LIST OF "McK. & R." CAPSULE^D PILLS
OF THE BRITISH PHARMACOPŒIA AND OTHER STANDARD AUTHORITIES**McKESSON & ROBBINS,**

WHOLESALE DRUGGISTS AND MANUFACTURING CHEMISTS,

ESTAB. 1833.]

NEW YORK, U. S. A.

[ESTAB. 1833.

Supplied by the Principal Wholesale Houses in the Trade throughout Great Britain and Ireland.

The reputation of Gelatine-Coated Pills has been created by our manufacture.	DOZ. BOTTLES containing/containing		Being completely sealed, all substances are perfectly preserved from oxidation.	DOZ. BOTTLES containing/containing	
	25 PILLS.	100 PILLS.		25 PILLS.	100 PILLS.
Aloin	5/	16/	Quinine, Bisulphate.....	5/	16/
"	8/	20/	" "	5/	16/
"	7/	24/	" "	5/6	18/
"	11/	40/	" "	7/6	28/
" Compound	7/	24/	" "	9/8	34/
" and Strychnine.....	7/	24/	" "	11/6	42/
" Strychnine and Belladonna	7/	24/	" Sulphate	5/	16/
" or Aperient, No. 1 (Clark).....	9/	32/	" "	5/	16/
" " No. 2, No. 3, No. 4	7/	24/	" "	8/	20/
Morphine Muriate	7/	24/	" "	8/	28/
"	9/	32/	" "	10/	36/
Narcotic Extracts (Brown-Sequard)	15/	58/	" "	12/	44/

A Complete List of Formulas and Prices will be mailed promptly on application.

In ordering, be careful to specify "McK. & R." CAPSULE^D PILLS.

Originated 1870, by McKESSON & ROBBINS, New York, U.S.A. Merchants, Shippers, and the Wholesale Houses in the Trade are supplied by Messrs. S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, London, E.C.; Messrs. BURROUGHS, WELLCOME & CO., Snow Hill Buildings, London, E.C.; and Messrs. HOCKIN, WILSON & CO., 38 Duke Street, Manchester Square, London, W.

NITROGLYCERINE TABLETS

Tabellæ Nitroglycerini, B.P. 1885 (Martindale).

By authority of the Medical Council, the compilers of the British Pharmacopœia have adopted and made OFFICIAL Nitroglycerine Tablets, as Manufactured by W. M. during the last ten years.

The Nitroglycerine is in a perfectly fixed solution in Chocolate. The Tablets are palatable, and weigh ONLY 2½ grains each. They are sold at the following prices:—

In Boxes, Retail 2s. 6d. and 4s. 6d. each.

For export to hot climates, corresponding quantities are supplied in bottles.

For Hospitals and Dispensing, in Bottles, 2 oz., 4 oz., 8 oz., and 16 oz. in each

Also CAPSULES OF IODIDE OF ETHYL, covered with Silk, 8 in a Box, Retail, 2s. 6d.

" " NITRITE OF AMYL, " " 12 " " 2s. 6d.

W. MARTINDALE, PHARM. CHEMIST, 10 New Cavendish St., Portland Place, W.

CURTIS & Co's EFF. BISMUTH, PEPSINE & STEEL

(Formerly YOUNG & POSTANS).

GRAN. EFFER. BISMUTH AND PEPSINE
GRAN. EFFER. BISMUTH, PEPSINE AND STRYCHNINE
GRAN. EFFER. BISMUTH, PEPSINE AND QUININE
GRAN. EFFER. BISMUTH, IRON AND QUININE
GRAN. EFFER. BISMUTH CITRATE
GRAN. EFFER. BISMUTH, IRON AND STRYCHNINE
GRAN. EFFER. CITRATE OF CAFFEINE.

GRAN. EFFER. IRON AND BISMUTH
GRAN. EFFER. IRON, QUININE AND STRYCHNINE
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GRAN. EFFER. IRON AND PEPSINE
GRAN. EFFER. IRON AND QUININE
GRAN. EFFER. IRON, QUININE AND PEPSINE
GRAN. EFFER. HYDROBROMATE OF CAFFEINE.

AND ALL OTHER GRANULAR PREPARATIONS.

GRANULAR EFFERVESCENT ANTIPYRIN

(ORIGINATED AND INTRODUCED BY CURTIS & CO.).

See that all these preparations bear the name of

CURTIS & CO., 48 Baker Street, Portman Square, LONDON, W.

SYR. HYPOPHOS. CO., FELLOWS.

CONTAINS THE ESSENTIAL ELEMENTS to the Animal Organisation—Potash and Lime;

THE OXIDISING AGENTS—Iron and Manganese;

THE TONICS—Quinine and Strychnine;

AND THE VITALISING CONSTITUENT—Phosphorus, combined in the form of Syrup with SLIGHT ALKALINE REACTION.

IT DIFFERS IN EFFECT FROM ALL OTHERS, being highly susceptible to oxidation during respiration, pleasant to taste, acceptable to the stomach, and harmless under prolonged use.

IT HAS SUSTAINED A HIGH REPUTATION, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It is employed also in various nervous and debilitating diseases with success.

ITS CURATIVE PROPERTIES are largely attributable to Stimulant, Tonic, and Nutritive Qualities, whereby the various organs are recruited.

ITS ACTION IS PROMPT, stimulating the appetite and the digestion; it promotes assimilation, and enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; hence it is of GREAT VALUE IN THE TREATMENT OF MENTAL AND NERVOUS AFFECTIONS. From its exerting a double tonic effect, and influencing a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE.—CAUTION.—The success of Fellows' Hypophosphites has prompted certain persons to utter substitutes. Mr. Fellows, having examined several of these, finds no two samples identical, and all differ from the veritable, in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnine in solution, and in the medicinal effects.

SPECIAL NOTICE.

Lest any Members of the Medical Profession may be misled by the many specious advertisements of imitators of Fellows' Syrup of Hypophosphites, Mr. Fellows begs to publish the following, viz.—

That he is the sole inventor of the formula of Fellows' Compound Syrup of Hypophosphites, which was discovered and prepared for the first time for his own use in 1865, when out of health;

That the testimonials bear date from the year 1868;

That the genuineness of the early testimonials was certified by Aaron Alward, Esq., M.D., Mayor of the City of St. John, Province of New Brunswick, Canada, and the great seal attached on 6th February, 1868; and

That the formula of the Syrup has never since been changed.

Mr. Fellows therefore refers to the printed form surrounding every bottle, where the letters may be found in detail.

As cheap substitutes are frequently dispensed instead of the genuine, Mr. Fellows can only advise that his Syrup should be prescribed in the original bottles, 4s. or 7s., where the distinguishing marks will prevent imposition.

To guard against possible substitution and disappointment, in prescribing please write "Syr. Hypophos. Fellows."

WHOLESALE AGENTS—

BURROUGHS, WELLCOME & CO., SNOW HILL BUILDINGS, LONDON, E.C.

"Tabloids" of Compressed Drugs.

B. W. & CO.'S HYPODERMIC POCKET CASES.

It has been well said that, "if the certainty, rapidity, convenience, and permanency of the Compressed Hypodermic Tabloids were better known, they would form part of the physician's paraphernalia." Doubtless the general practitioner could possess within a space sufficiently small to be carried in the vest pocket a complete armamentarium for combating disease either by subcutaneous injection or by the mouth. Solutions of the alkaloids rapidly decompose and should be freshly prepared. This may be conveniently done by using the B. W. & Co.'s Hypodermic "Tabloids." A "tabloid" is readily soluble in 5 or 6 minims of water, and a solution thus made will not produce suppuration at the seat of injection.



B. W. & Co.'s No. 7 Hypodermic Tabloid Pocket Case,

Filled and fitted complete, 15s.

An Illustrated price List of Cases supplied free on request.

LIST OF HYPODERMIC TABLOIDS

(Pure, Portable, and Reliable)

PREPARED BY B. W. & CO.

Aconitin (crystalline)...	1-260 gr.	Hyoscyamin (crystalline)	1-80 and 1-50 gr.
Apomorphine ...	1-15 and 1-10 gr.	Hyoscine...	1-200 and 1-75 gr.
Atropin Sulph. 1-150, 1-100, and 1-60 gr.		Morphine Bi-Meconate, 1-8, 1-6, 1-4	
Caffein Sodlo-Salicylate ...	1-2 gr.	and 1-3 gr.	
Codein Phosphate ...	1-4 gr.	Morphine Sulphate, 1-12, 1-8, 1-6, 1-4	
Cocaine ...	1-6, 1-4, and 1-2 gr.	1-3, and 1-2 gr.	
Colchicin ...	1-100 gr.	Morphine and Atropine combinations.	
Cornutin ...	1-60 gr.	Pilocarpin ...	1-10, 1-3, and 1-2 gr.
Curare ...	1-12 gr.	Quinine Hydrobromate ...	1-2 gr.
Digitain ...	1-100 gr.	Sclerotic Acid ...	1-2 and 1 gr.
Ergotinin ...	1-150 gr. and 1-300 gr.	Sparteine Sulphate ...	1-2 gr.
Eserin Salicylate (unirritating) 1-100 gr.		Strophanthin ...	1-500 gr.
Homatropin (unirritating) ...	1-250 gr.	Strychnine 1-150, 1-100, and 1-60 gr.	
Hydrarg. Perchlor. ...	1-60 and 1-30 gr.		

Hypodermic Tabloids of the principal Drugs and Alkaloids supplied to the Trade in Tubes, containing from 12 to 20 Tabloids each, price 12s. per dozen tubes.

"TABLOIDS" OF COMPRESSED DRUGS.

The "Tabloids" of Compressed Drugs are now recognised by the large majority of medical practitioners as a most convenient and portable means for prescribing the drugs generally employed in practice. In compressing the "tabloids" due consideration is taken as to the probable use of each "Tabloid." Those usually employed for local effect—as, for instance, Chlorate of Potash "Tabloids," or Chloride of Ammonium "Tabloids," are compressed very firmly, thus allowing for the "Tabloid" to be slowly dissolved in the mouth, in which case the solution acts as a continuous application to the mouth and throat. When the drug is usually employed in solution, the "Tabloids" are compressed with the intention of their readily dissolving in water. Instances of these are found in the Pot. Bromid., Pot. Iodid., or Chloral Hydrate "Tabloids." Other "Tabloids" contain extracts, &c., which have been previously prescribed as pills; over these the "Tabloids" possess many advantages. 1. They contain no

adhesive material, and readily disintegrate in the stomach. 2. They do not become hard and insoluble by age. 3. They are made of the purest drugs obtainable. 4. They are accurate in dosage, and their action can always be implicitly relied upon.

Dr. J. A. MARSTON, Deputy Surgeon-General, in his official report on the International Medical Congress, held at Washington, says: "These 'Tabloids' are not more expensive than the ordinary forms of administering medicines, as they can be made at a very small advance on the crude drug. They keep well in all climates, and are unaffected by heat and moisture. Specimens were examined which had been round the world in s.s. 'Ceylon.'" Mr. H. M. Stanley, in his work, "The Congo," vol. ii., pages 225 and 327, also in his latest work, "In Darkest Africa," refers to their value.

The Editor of the "British Medical Journal," July 12th, 1890, says:—"Surgeon Parke has personally informed us that the concentrated preparations and 'Tabloids' retained their efficiency throughout the whole journey, and were of the utmost value by reason of their efficiency and portability."

We offer the following, amongst others of all sizes (B. W. & Co.), Medical Pocket Cases, fitted with a most useful assortment of Compressed Drugs in the form of Tabloids.

B. W. & Co.'s Morocco Case, No. 15, containing 10-6 drachm vials filled with Tabloids, &c., from 20s.

B. W. & Co.'s Calf Case, No. 17, containing 16-6-drachm vials filled with Tabloids, &c., from 30s.

TABLOIDS prepared by B. W. & Co.

Aconite Tinct., 1 min.	Pepsin Saccharated, 5 gr.
Aloin, 1/10 gr.	Peptoulo. (See Formula.)
Ammon. Bromide, 5 and 10 gr.	Phenacetin, 5 gr.
Ammon. Chloride, 3, 5 and 10 gr.	Pilocarpin Mur., 120 gr.
Ammon. Chloride with Borax.	Podophyllin Resin, 1 1/2 gr.
Anti-Constipation. (See Formula.)	Potash Bicarb., 5 gr.
Antifebril, 2 gr.	Potash Chlorate, 5 gr.
Antimony Tartrate, 1/50 gr.	Potash Chlorate with Borax.
Antipyrin, 5 gr.	Potash Nit. (Sal Prunella), 5 gr.
Apomorphine Mur., 1/50 gr.	Potash Permanganate, 1 and 2 gr.
Arsenious Acid, 1/100 and 1/50 gr.	Potassium Bromide, 5 and 10 gr.
Atropin Sulph., 1/100 gr.	Potassium Iodide, 5 gr.
Belladonna Tinct., 1 min.	Quinine, 1-10, 1, 2, 3, and 5 gr.
Bismuth Sub-nit., 5 and 10 gr.	Quinine Sulphate, 1 gr.
Blue Pill, 3 gr.	Iron Hypophosphite, 2 gr.
Borax, 5 gr.	Acid Arsenious.
Caffein Citrate, 1 gr.	Strychnine Sulphate, aa 1/50 gr.
Calcium Sulphide, 1/10 gr.	Saccharin, 1/100 gr.
Calomel, 1/10 and 1 gr.	Rhubarb, 3 gr.
Caprylic Tinct., 1 min.	Rhubarb Comp. (Pil.), 3 gr.
Cascara Sagrada, Dry Ext., 2 gr.	Rhubarb Comp. Pulv. (Gregory Powder), 5 gr.
Cascara Sagrada Ext. (Dry), 1 gr.	Rhubarb and Soda, 5 gr.
Euonymin, 1/2 gr.	Saccharin, 1 gr.
Nux Vomica Ext. 1/16 gr.	Salicin, 5 gr.
Cathartic Comp., U.S.P.	Satol, 5 gr.
Chloroform, 5 gr.	Santonin, 1/2 gr.
Chloral Hydrate, 5 and 10 gr.	Soda Bicarbonate, 5 gr.
Cocaine, Potash, and Borax (Voico)	Soda-Mint (Soda, Ammon. Carb. & Mint)
Oil of Aromat. cum Opo Pulv., 5 gr.	Soda Salicylate, 3 and 5 gr.
Digitalis Tinct., 1 min.	Strophanthus Tinct., 2 min.
Digitalin, 1/100 gr.	Sulphonal, 5 gr.
Dover Powder, 1/4 and 5 gr.	Sulphur Comp. (Dr. Garrod's Formula)
Euonymin Resin, 1/8 gr.	Tannin, 24 gr.
Ferrum Redactum, 2 gr.	Test Tabloids (Fehling's).
Hydrarg. cum Creta (Grey Powder),	Thirst.
Hydrarg. lod. Rub., 1/20 gr.	Thust. Oamph. Oo. (Paragoric), 2 min.
Hydrarg. lod. Vir., 1/8 gr.	Iron Pyrophosph., 2 gr.
Hydrarg. Perchlor., 1/100 gr.	Quinine Sulph., 1 gr.
Hydrarg. Subchlor. (Calomel), 1/10 and 1 gr.	Strychnine Sulph., 1/100 gr.
Hydrastia Mur., 1 gr.	Trinitrine (Nitroglycerine), 1/100 and 1/50 gr.
Hydrastia Comp.	Trinitrine and Amyl Nitrite.
Hyoscyamus Tinct., 1 min. (1/2 & 5 gr.)	Trinitrine, 1/100 gr.
Ipecac. and Opium (Dover Powder)	Nitrite of Amyl, 1/2 gr.
Ipecac. Powder, 1/100 and 5 gr.	Capicum, 1/50 gr.
Iron and Quinine Cit., 8 gr.	Menthol, 1/50 gr.
Laxative Vegetable. (See Formula.)	
Lithia Carbonate, 2 gr.	Urothane, 5 gr.
Manganoso Dioxide, 3 gr.	Viole (Potash, Borax, and Cocaine).
Morphine Sulph., 1/20 and 1/8 gr.	Warburg Tincture, 30 mins. in each.
Nitroglycerin, 1-100th gr.	Zinc Sulphate, 1 gr.
Nux Vomica Tinct., 1 min.	Zinc Sulpho-carbonate, 2 gr.
Opium Tinct. (Laudanum), 2 min.	Zymine Tabloids, 2 gr.
Papain (Dr. Finkler), 2 gr.	Zymine Comp. Tabloids. (See Formula)
Pepsin, Pure (Fairchild).	

These pure and portable Tabloids of Compressed Drugs are supplied in convenient packages for dispensing, and at moderate prices.

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.



CRICKET.—On Saturday last the return match was played, at Regent's Park, between the Pharsalia C.C. (Messrs. Sangor & Sons') and an eleven from Messrs. Newbery & Sons'. The Pharsalians were the first to go to the wickets, scoring 60 runs. Their opponents' innings realised 62, thus resulting in a victory for the City team. The previous match was played at Primrose Hill, on July 12, and resulted in a victory for the Pharsalia by 11 runs.

CARBOLIC-ACID POISONING.—On Saturday an inquest was held at Shadwell respecting the death of John Hennessy, aged two years and six months, the son of a bricklayer. The evidence showed that on Monday of last week the child had climbed up upon a chest of drawers and taken from it a Swiss-milk tin which contained carbolie acid, and had drunk the contents. The child's mother saw it do this, but she did not interfere, as she thought there was only milk in the tin. The child was taken to Shadwell Hospital, and died there.

WHOLESALE DRUGGISTS' WAREHOUSE ON FIRE.—On Sunday morning, at 11 o'clock, a fire broke out in the premises of Messrs. Langton, Hicks Brothers & Co., wholesale druggists, situated at 38 Wilson Street, Finsbury, E.C. When first discovered the fire had a very threatening appearance, the flames and smoke coming through the roof, and the firemen had to hurst doors open and break skylights in order to bring the hose to bear on the seat of the fire. After a short time they succeeded in overcoming the flames before the damage had spread far, but the newspapers put it that two floors were entirely gutted and much serious damage done. This is somewhat exaggerated, however. One of our representatives called on Monday, and ascertained that the fire broke out in the laboratory on the top floor, and did not extend downwards. How the fire originated is not known. Last week the laboratory was not in use, workmen being engaged on it laying a new cement floor, and when the premises were shut up on Saturday afternoon there was nothing about which was at all likely to cause a fire. Luckily just above the laboratory there was a very large water-cistern, which hurst soon after the fire was discovered, and thereby saved the premises.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

CRICKET.—The Chemists' Association cricketers met the Small Heath Langley club on Wednesday, and going in first totalled 67. Their opponents lost one wicket for 96. The M.C.C.A. say the weather elaborately arranged itself for their discomfiture.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—At a meeting of the Council of this Association, held on Monday last at the Mason College, the following were elected officers for the forthcoming session:—President, A. Southall, F.C.S., Birmingham; vice-presidents, W. H. Pullen, Leamington, and Charles Thompson, Birmingham; hon. treasurer, C. J. Arhlaster, Birmingham; hon. librarian, G. E. Perry, F.C.S., Birmingham; hon. secretary, T. H. Alcock, Birmingham. Other members of the Council: Messrs. T. Barclay, F. Barlow, T. W. Chapman, C. G. Crooke, S. Dewson, E. Ferriday, H. Howes, M. Magor, A. E. Robinson, F.C.S., and S. Taylor, Birmingham; J. Hinds and W. F. Wyley, F.C.S., Coventry; W. H. Richardson, F.C.S., Dudley; G. Thonger, Harborne; J. T. Barrett, Leamington; W. R. Sellick, Stourbridge; J. O. Morris, Walsall; R. D. Gibbs, Wednes-

bury; and F. J. Gihson, Wolverhampton. The inaugural address will be delivered in October. Mr. Thompson, the new vice-president, has acted as one of the honorary secretaries for the past eight years.

SUICIDE OF A CHEMIST.—Robert Cayhill Tom Ratclyffe, aged 49, formerly a wholesale chemist and druggist and drysalter, carrying on business in Birmingham, committed suicide by hanging himself at his house in Chestnut Road, Moseley, on Sunday morning. An inquest was held on Tuesday, when it was stated by the widow that the deceased had recently had considerable losses in business, which worried him very much. He had lately been employed as a commission agent, but had very little to do. This had a depressing effect upon him. He failed as a chemist two years ago. Of late he had not been altogether sober. He had never said anything about committing suicide excepting on Saturday, when he put his handkerchief round his neck and said he did not think life was worth living, adding, "I am sorry for you, missis!" He, however, passed it off with a laugh, and witness had no suspicion that he meant anything by the remark. A neighbour told the coroner that when he was called in he found the deceased suspended from the balustrade by a silk handkerchief. Deceased had frequently complained about being worried in business, but usually, as far as witness had been able to see, presented a cheerful aspect. Mr. Hall, surgeon, said deceased might easily have put his foot upon the stairs and escaped strangulation. A verdict of "Suicide whilst temporarily insane" was returned.

DERBY.

CHEMISTS AND THE HALF-HOLIDAY MOVEMENT.—Latefy there has been some correspondence in the daily press here relating to this matter, and a letter appears in one of the daily papers from Messrs. J. Ward & Co., of Normanton Road, complaining of the way they have been treated by a newspaper to which they addressed a communication in answer to one which had already appeared in that journal's correspondence columns. They say their letter went to the office of the paper referred to, but instead of being inserted a canvasser was sent up at night to say that the chemist who had attacked the movement had paid for his letter, and that they would be expected to do the same. This they refused. Messrs. Ward complain that "nine-tenths of the readers have taken it as a *bona-fide* letter," and think it a hardship that "by virtue of this newly-invented *clôture*, anyone may throw down the gauntlet in the arena of 'Correspondence.'"

MANCHESTER.

THE DRUGGIST NOT TO BLAME.—It is comforting to find that, so far as the investigation has gone, no blame is attached to anybody connected with the drug trade for supplying the arsenic with which the man Corfield is alleged to have poisoned his two children. At present the theory of the prosecution is that the arsenic found in the pudding of which the children had partaken, and other arsenic found in the prisoner's house, was probably got from the works of Messrs. Kupferberg & Co., manufacturers of calico-printers' and dyers' chemicals. Corfield, it appears, was in the habit of going to Kupferberg's premises to buy for re-sale empty tins which had been previously filled with white arsenic, and it is thought that during one of his visits he may have lifted a handful of the arsenic from an open tin which was standing in a shed, close to where the empty tins were standing. Although arsenic has been found in his house, the possession of the poison has not yet been traced directly to the prisoner.

NEWCASTLE-ON-TYNE.

EXCELSIOR.—A noticeable feature in connection with the local College of Medicine is the number of pharmacists who are aspiring to the higher profession. In several instances the studies are carried on simultaneously with the conduct of business establishments in surrounding towns. It is also worthy of note that these gentlemen succeed in taking places among the prize-winners.

THE WEEKLY HALF-HOLIDAY MOVEMENT has had but poor success here. Those chemists who had dispensing businesses to attend to have all along held aloof from it. It was tried at both ends of the town, but Byker has proved retrograde, and Wednesday again sees the pharmacies open all day.

SHOP NEWS.—The business of Mr. Cormack was last week open to tender as a going concern; there have been some "nibbles," but no complete result. Mr. Ritson has introduced the electric light into his pretty little shop in Blackett Street. The effect would have been better if he had done away with gas altogether, as the mixing of the lights mars the success of the brighter illumination.

NORTH OF ENGLAND PHARMACEUTICAL ASSOCIATION.—A meeting of the council of this association was held in the Durham College of Science on August 21, when the reports of the lecturers in connection with the pharmaceutical classes were presented. A letter was read from Mr. C. E. Stuart, B.Sc., resigning his position as lecturer on botany, which was accepted, and a hearty vote of thanks accorded to him for having given the lectures for the past five years. On the motion of Mr. N. H. Martin, seconded by Mr. Jno. Harrison, Mr. M. C. Potter, M.A., F.L.S., lecturer in botany and biology in the Durham College of Science, was appointed lecturer to the pharmaceutical classes. A draft syllabus of the lectures on botany, chemistry, materia medica, and pharmacy to be delivered next session was submitted and approved. Delegates from the association were appointed to the British Pharmaceutical Conference.

NOTTINGHAM.

TRIP.—The staff of "Messrs. Boot's Pure Drug Company" had their annual outing on August 21. The party were driven to Hazleford, where, after indulging in cricket, football, skittles, &c., they were entertained to a substantial tea, over which Mr. Godson presided. They got back to Nottingham about 10 P.M., having thoroughly enjoyed the trip.

PLYMOUTH.

THE PLYMOUTH CHEMICAL LABORATORY have just issued the results of the Science and Art Examinations, South Kensington, held in May last. The successes in the Pharmaceutical section include the name of one of the Bell scholars (H. Garnett), and are as follow:—Inorganic chemistry, theoretical, advanced stage, first class: A. Sikes, E. Wood; second class, F. Towan. Elementary, first class: C. Macgregor, H. Roberts. Inorganic, practical, advanced stage, first class: A. Sikes; second class, F. Towan, E. Wood. Elementary, second class: C. Macgregor, H. Roberts. Organic, theoretical, elementary stage, first class: A. Sikes, F. Turney, E. Wood. Organic, practical, advanced stage, first class: F. Towan. Organic, practical, elementary stage, first class: A. Sikes; 2nd class, H. Garnett (Bell scholar), F. Turney, E. Wood.

SOUTHAMPTON.

THE HALF-HOLIDAY.—The leading business-men of Southampton have at last decided upon closing one day a week at 5 P.M., and a petition has been sent to the Mayor requesting him to call a public meeting for the purpose of coming to an agreement on the subject. This he has done, and the meeting took place on Thursday, August 28. Most of the leading chemists have signed the petition.

SOUTH SHIELDS.

PROFITABLE EXTRAS have often been discussed in *THE CHEMIST AND DRUGGIST*; but the special feature of South Shields extras has so far been untold in these columns. South Shields boasts a fair which for some days provides high carnival for the inhabitants, and for their delectation the pharmacists provide a comestible known as spice nuts. These are a kind of spiced gingerbread baked in the form of small cobs, or biscuits, about the size of a couple of walnuts. They are no small item, but are turned out in quanti-

expressible not in pound or stones but in tons, taxing for some weeks the resources of the erstwhile pill-rollers. They are usually made on the premises, and sent out to a baker's for the baking. They evoke considerable ingenuity in their advertising, and placarded caravans parade the streets with such deliverances as "Rich and rare beyond compare," &c. And the knights of the pestle, with their attendant squires the bakers, are rewarded by the price of from 9d. to 1s. per lb.

SUNDERLAND.

A FIRM OF MEDICAL MEN have opened an Apothecaries' Hall here. There is no ultra-professionalism about the venture. Feeding-bottles, tooth enamel, teething-pads, and various small items of a chemist's stock-in-trade are introduced to supplement the more lofty arts for which the establishment is particularly designed.

SHOP HOURS have been the subject of debate in the local trade association. Unanimity has not, however, been attained; for while the chemists on the outer sections of the town have been in favour of a weekly half-holiday, some of the craft in the centre of the town have held to the view that shortening of each day's labour is better, and so for the present nothing is accomplished.

IRELAND.

OFFICERS FOR THE APOTHECARIES' HALL OF IRELAND.

—At the annual general meeting of the court of examiners and directors of the Apothecaries' Hall of Ireland, Mr. Richard O'Flaherty was elected governor, Mr. Philip Baxter was made vice-governor, Dr. Montgomery was re-elected secretary, and Professor Tichborne, M.P.S.I., was appointed to the seat in the court vacated by the late Mr. Edward Bolland.

TRADE CHANGES IN DUBLIN.—Mr. G. A. Strych, L.A.H., compounder to Jervis Street Hospital, has purchased the Medical Hall, 74 Lower Camden Street, from Dr. J. Maguire. Mr. R. McConnell, chemist and druggist, has purchased Keatly's pharmacy, 113 Lower Dorset Street, from Mrs. Keatly, the widow of the late P. Keatly, L.P.S.I. Mr. Allen, apothecary and chemist, has opened a medical hall at 8 Arran Quay.

OVERDOSE OF SLEEPING-DRAUGHT.—At Douglas (county Cork) Petty Sessions on Monday, Miss Mary Horgan, a nurse in Cork Workhouse, was charged with causing the death of Bridget O'Brien, aged 21, a dressmaker, by administering an overdose of sleeping-draught. Death, it appears, resulted from failure of the heart's action, accelerated by an overdose of sleeping-draught administered in error. Miss Horgan was really hospital cook, but for the past three years officiated as nurse, in addition to her other duties. Instead of one teaspoonful of medicine she gave about seven when the patient was delirious. She stated to the doctor that she was confused with the excitement and forgot the directions. The doctors and officers of the workhouse spoke highly in favour of the prisoner, and the case was further adjourned.

SCOTLAND.

DUNDEE.

THE ASSISTANTS' AND APPRENTICES' ASSOCIATION celebrated their last half-holiday this season by visiting Balruddy, the residence of Mr. Martin White, a Dundee merchant, who had kindly given permission. One of the features of the day was a cricket-match between the assistants and the apprentices, in which the latter scored 76 to the assistants' 56.

EDINBURGH.

A PATENT CASE.—At the Court of Session on Friday, August 22, William Young, consulting chemist, of Priorsford, and G. T. Beilby, chemist, St. Kitts, Slateford, sued the Hermand Oil Company, Edinburgh, to have them account for the amount of shale distilled or manufactured by them in apparatus worked according to the inventions of the pursuers, held under letters patent, of which the defendants

were licensees. Failing account, payment of 1,000*l.* was asked. A royalty of 1½*l.* per ton was paid to the pursuers, and it had come to their knowledge that the defenders had not accounted for the full amount of shale manufactured. An interlocutor was issued in favour of the defenders, allowing them expenses.

PAISLEY.

FIRE IN A CHEMIST'S SHOP.—The fire which occurred last week in the shop in Gilmore Street occupied by Mr. Harrison was caused by the fumes from a quantity of methylated spirit becoming ignited and exploding by the sparks falling from the burning ceiling. Firemaster McNaughton, who was injured at the time, had no light in his hand when the explosion took place.

General News.

NANTWICH DRUG-CONTRACT.—At a recent meeting of the Nantwich Board of Guardians exception was taken to the fact that cod-liver oil was being supplied to the various districts by the medical officers, and one of the members proposed that the board should advertise for tenders for the supply of cod-liver oil. After a lengthy and rather warm discussion, a committee was appointed to inquire into the matter.

MIDDLESBOROUGH GUARDIANS AND THEIR DRUGS.—At a meeting of this Board on August 20, the subject of supply of drugs, chiefly quinine and cod-liver oil, to pauper patients by the medical officers was discussed, and several letters were read from the medical officers of the various districts. Complaints appear to have been made here, as in other cases we have reported, as to the prevailing expensive system of drug-supply direct from the medical officers, and like the Nantwich Board, the Middlesboro' guardians have appointed a committee to inquire into the matter.

PETROLEUM EXPLOSION.—On August 13, at Brooklyn, U.S., a large agitator in the Standard Oil-yard exploded with such terrific force that windows and doors were smashed in within a radius of a mile. The concussion was so great that several workmen were knocked to the ground, but fortunately no persons, as near as can be ascertained, were seriously injured. Simultaneously with the explosion a mountain of flame shot skyward for an instant. The flames were quickly extinguished. The damage is estimated at about \$5,000.

EXPLOSION IN A U.S. SOAP-FACTORY.—At Providence, Rhode Island, on August 14, an explosion, originating from a cause not yet known, occurred in the third floor of the Kendall Manufacturing Company's large soap-factory, at the corner of Page and Friendship Streets. The principal damage was done on the third floor, where the flames burst forth and some acids stored there were blown about, severely injuring a number of persons. Of these ten were taken to the hospital badly burned. Two men are probably fatally injured. Their clothing was torn from their bodies and the flesh burned and blistered so badly that it dropped off in patches.

POISONED BY TOADSTOOLS.—An agricultural labourer's wife, named Wing, and her family, living at Stanton St. John, about four miles from Oxford, have been suffering from the effects of eating deleterious fungi in mistake for mushrooms, and in the case of one child, aged two years and a half, fatal results have ensued. The mother gathered the supposed mushrooms herself, and fried them with bacon for tea. She and her six children partook of them. Subsequently the woman was prematurely confined, and is not expected to recover. It is believed the other children will recover. On August 26, an inquest was held on the body of the child who died, and the jury returned a verdict of death from eating poisonous fungi.

THE WINTER SESSION.—The introductory lecture on the opening of the medical session will be delivered on Wednesday, October 1, at the Middlesex Hospital, by Mr. W. C. Storer Bennett, F.R.C.S.; at St. George's Hospital, Mr. Augustus Winterbottom; at University College, by Dr. Thomas Barlow; and at St. Mary's, by Dr. M. Handfield-

Jones. At St. Bartholomew's, Guy's, St. Thomas's, Charing Cross, and the London Hospitals the practice of delivering an address has been discontinued. The winter session at King's College will be opened on October 1, at 4 P.M., when the annual distribution of prizes will take place; and at St. Thomas's the prizes will be distributed by Sir Frederick Pollock. As already announced, the introductory address to the pharmaceutical students at the School of Pharmacy, Bloomsbury Square, will be delivered by Sir Edward H. Sieveking, M.D.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent)

COSTLY DISPENSING.—A pharmacien of Grenoble has been condemned by the Correctional Tribunal to 500*f.* fine and costs for substituting naphthaline for naphtol ordered in a prescription.

PHYSICIAN-INSPECTOR WEBER has been appointed director of the Val-de-Grâce School of Military Medicine and Pharmacy, in place of Dr. Gaujot, now superannuated. Dr. Weber was the official delegate representing French military medicine at the Berlin Congress.

GUARDING AGAINST CHOLERA.—The Superior Council of Hygiene, at a special meeting called by the Minister of the Interior to consider the Italian proposals respecting sanitary precautions against cholera, has declared in favour of an international sanitary commission.

THE COMING PARIS UNIVERSITY.—While provincial towns are quarrelling as to which is to secure one or the other of the projected universities, the claims of Paris to the distinction are contested by no one. The five faculties of law, theology, medicine, letters, and sciences, with the Superior School of Pharmacy, are to form a nucleus around which other scientific and literary organisations may be grouped afterwards.

DEATH OF FENAYROU.—New Caledonia papers announce the death of the convict pharmacist while undergoing a life-sentence for the sensational murder of Aubert, another pharmacist, in 1883, at first employed in the Bourial Hospital laboratory. Fenayrou obtained afterwards a grant of land, and took steps to have his wife, his accomplice, to join him. But having, in the meantime, been detected keeping a clandestine pharmacy, the permit was refused, the land grant annulled, and the convict ordered to work the Houailou ferry-boat. There he is said to have contracted the liver-disease which caused his death.

FIGHTING THE FRENCH "OCTOPUS."—A Bill has been introduced by Deputy Francis Laur providing that henceforth the petroleum duties shall be as follows:—(1) On petroleum and all mineral oils suitable for illuminating purposes, 25*f.* per 100 kilos. (10*s.* per cwt.), whether raw or refined, when imported direct from producing countries, and 27*f.* when imported from European warehouses. (2) On heavy mineral oils, petroleum, and other mineral tars, 18*f.* and 20*f.* per 100 kilos, according to where imported from. At present raw petroleum imported direct pays 18*f.*, and refined 25*f.* per 100 kilos. The object of the Bill is to put a stop to the frauds committed by refiners. Another aim of the Bill is to checkmate the petroleum-refiners, who have combined into a ring, like the Standard Oil Company, the model American "octopus," to better fleece consumers. It should be added that, at present, petroleum imported from warehouses pays 5*f.* duty more than when coming direct. The difference, M. Laur thinks, is too much, especially since it has been used by the Trust as a pretext for raising the retail price of illuminating oils. Taken altogether, the idea of the Bill seems to be to break up the ring by encouraging free foreign competition—a device sometimes successful.

PROTECTING COLONIES.—A Bill has been introduced in the Lower House, chiefly by colonial deputies, greatly changing the tariff on coffee, cacao, pepper, and like tropical products. The reason given is that, while formerly French colonies supplied a reasonable share of such commodities, now they send to the mother-country barely 1 per cent. of coffee, about 4 per cent. of the cacao, and 2 per cent. of the

cloves imported. As to pepper, next to none is shipped. Considering that such decline is owing to the heavy fiscal charges cheerfully borne by the colonies to aid the mother-country, it is only just they should recoup on some of the customs dues. As, on the other hand, there are objections against increasing the duties on foreign importations, the Bill proceeds by lowering the rates applicable to colonial productions. It establishes the following duties:—Coffee, 78f. for 100 kilos.; cacao, 52f.; cloves, cinnamon, whole nutmeg, pepper, and pimento, 104f.; cleaned nutmeg and mace, 156f.; vanilla, 208f., or exactly half the rates of foreign importations direct. To explain the mechanism of their plan the promoters consider one-half of the present duties to be a tax on consumption, and the other half customs due from which colonies should be exempted. Other allied substances are also provided for under other headings. For instance, colonial vanillin is to pay 104f. per kilo., and the foreign 208f., while the home-made article would pay an excise-tax of 104f. per kilo. Ramee, aloes fibre, all textile matters, and all perfumery essential oils of colonial production to be admitted free. The Bill has been favourably considered, and referred to the Tariff Commission.

THE ROUEN PHARMACISTS FINALLY VICTORIOUS.—After a protracted contest, pharmacists have again established their right to be the sole dispensers of medicines. The suit in question was originally begun by pharmacist Soudan, nominal plaintiff, against the Rouen hospitals' management and sisters employed by them, for dispensing medicines in five dispensaries, none of said dispensaries being under the personal supervision of a graduated pharmacist. The Rouen tribunal, first appealed to, decided in favour of the hospitals, chiefly for the reason that the medicines were prepared in a central laboratory managed by a regular pharmacist. But the Cour de Cassation held such doctrine to be bad law, quashed the judgment, and referred the case to the Caen Court of Appeals for a new trial. The supreme court could not very well act otherwise, since it has invariably held that medicaments, wherever prepared, can only be dispensed by a pharmacist, or someone under his personal direction, and that there must be one pharmacist for each dispensing-place. There are, of course, exceptions, well defined by law, but they do not apply here. Now the Caen Court has delivered its judgment. It holds that the sisters attending the five dispensaries have violated the law by dispensing medicines even when prepared by a pharmacist at the central pharmacy; orders such dispensing to cease; sentences the sisters to all costs; and declares Legras, the Vice-President of the Bureau de Bienfaisance commission, to be civilly responsible for all costs and fines incurred by the five directresses and one employee of said dispensaries; and finally allows to plaintiff, pharmacist Soudan, all costs incurred, as damages.

FORETELLING STORMS.—A singular apparatus was on August 25 presented to the Academy of Sciences by R. F. Fortin, a parish priest in a village near Orleans. The instrument consists of a glass jar about 7 inches high and 4½ wide, covered with a close-fitting glass plate. Inside, a glass cylinder, supported by four glass feet, horizontally rests on the bottom of the jar. Around the cylinder seven or eight pieces of tin-foil are wound up to act as condensers, and over them fifty to a hundred coils of soft iron wire. Finally a copper wire about 3 inches long is suspended through its centre from the lid, by means of a single cocoa-nut fibre, so as to move freely close to the top of the coil. The strange instrument, according to its inventor, is extremely sensitive to atmospheric magnetism, and will foretell storms long ahead, the nature, suddenness, and amplitude of the needle's deviations varying with the severity and distance of the coming storm. The reverend gentleman tried to give of his apparatus some sort of a theory which might be acceptable with a steel needle, magnetic or not, but will hardly pass in the case of copper wire. Certain it is, though, that the instrument is not a dull one, as while it was in the ante-room your correspondent having come close to it for a good look, the needle began to cut most extraordinary capers which ceased with the disturbing body's removal. This peculiarity was noticed afterwards by others in the sitting-hall, and alluded to by M. Fortin, who said all observations should be taken from a distance—an easy thing considering the needle's deviations are always very marked. However it may be, he claimed to have foretold all the recent storms this year. As

such appears to have been the fact in several instances from previous communications received by the Academy, the new weather-prophet was invited to keep on sending his forecasts, and a committee, composed of MM. Mascart, Faye, and Fizeau, was appointed to examine the new instrument which—perhaps the strangest of all—has not even a name as yet.

BANKRUPTCY REPORT.

Re JANE and JOHN HOLD BARON, 13 Sheffield Road, Barnsley, Wholesale Druggists and Tobacconists.

THE first meeting of the creditors of the above-named debtors was held at the office of the Official Receiver, Barnsley, on August 20. The Official Receiver (Mr. Clegg), who presided, said the affair was very unsatisfactory. The receiving order was made on July 24, and he sent the usual notice to the debtors to attend upon him, but only J. H. Baron had attended. No statement of affairs had been made, and consequently both debtors were liable to be sent to prison for contempt. It appeared that the business was commenced in 1852 by John Baron, and at his death, in 1869, the debtor, Jane Baron, carried it on until five or six years ago, when her son, the other debtor, became a partner. They appeared to have been in difficulties for a long period, as Job Baron stated that they were in debt in 1881, and in 1884 a composition of 15s. in the pound was paid to all their creditors. He also stated that no books whatever had been kept, but it appeared to him that they could not have carried on the business as they had done without books. They became aware of their insolvency five years ago, and had since that time traded and contracted other debts. In explanation they said they expected the price of tobacco to rise, but they never had a large stock of tobacco, and if the price had gone up it would not have helped them at all. The simple fact was that since they paid the composition they had been living on their creditors. They had never taken stock, and no statement of affairs had really been delivered. He had received a note in which they said that their unsecured debts were 910*l.* odd, and partly secured 688*l.* 16*s.* 10*d.* They estimated their stock to produce 200*l.*, machinery 100*l.*, furniture 50*l.*, and book debts 4*l.* 6*s.* 8*d.*—a total of 354*l.* 16*s.* 8*d.* From this 115*l.* 14*s.* 2*d.* had to be deducted for preferential creditors. The stock, &c., had been sold, and had only produced 120*l.*, and there was nothing to account for the deficiency of 1,276*l.* He could only say that the debtors would have to do a great deal more before they passed, and if they did not attend he should certainly ask the Court to commit them. The debtors would have to account for the 1,276*l.*, and also for 7*l.* which they had in hand when the paper was made out.

The Debtor (J. H. Baron) said they had lived with it.

Mr. Clegg said they must not live on their creditors. They would also have to deliver up all the rings, watches, and jewellery they had, and if they kept anything back they would be sent to prison. (To the male debtor): What have you done in betting?

The Debtor: I have made a book.

Mr. Clegg: You will have to give particulars of it.

The Debtor: I have all the books for two or three years.

Mr. Clegg: I suppose that is where the money has gone?

The Debtor: Well, the books will show. The debtor also said he would have left the shop ten years ago but for his mother, who had been there ever since it was opened, and did not like to leave.

Mr. Clegg said they had been living on their creditors, and if the place did not pay they should have left. They had better have the papers ready at once, for if they did not he would probably apply to the judge for them to be sent to prison the next day. They had had since July 11 to prepare the papers, and if they imagined that they were going to set the law at defiance in that way they were mistaken. He did not see any good in appointing a trustee. The creditors present being of the same opinion, the matter was left in the hands of the Official Receiver.

GURJUN OIL is recommended as preferable to copaiiba in chronic bronchitis.

THE COLLECTION OF NARCOTIC HERBS.

IN this journal (May 31, 1890) some description was given of the manner of gathering foxglove on the Continent. Obviously many of the particulars then related do not apply with equal force, if at all, to the collection of some other herbs of the same class. While, for instance, it is easy to procure foxglove leaves of good quality and of fine appearance, considerable difficulties stand in the way of obtaining from uncultivated plants of

DATURA STRAMONIUM

leaves either good in quality or satisfactory as to quantity. Although *Datura stramonium* will be found here and there in clustered groups, or, as one may say, settlements, yet it does not cover such extensive areas as digitalis, and shows a tendency to become even more restricted in habitat. The plant seems to prefer wastes and more or less exposed situations; and, as such land is much less frequently met with than the hilly forests which digitalis affects, its comparative scarcity is not difficult to understand. Further, stramonium is a slow-growing plant, and specimens may be found actually bearing flowers and fruit at the same time. The collector of folia stramonii is also at a disadvantage in that, even when he has found his plants, the leaves are few in number, and that often some of them are found more or less damaged from lying upon the soil. Leaves of the finest appearance, too, quickly become dull after gathering, and consequently, if the initial value of the crop is to be preserved, have to be dried at once, avoiding as much as possible all previous transport and storage. Even with the greatest care the stramonium leaves shrink unequally and become wrinkled and distorted in drying, owing partly to their natural structure. On the one hand, the nerves or prosenchymatous parts of the leaf are largely developed and strong, while the "intranervial" parenchyma is soft and succulent, losing very much in weight during drying. These circumstances make it singularly difficult to obtain good datura leaves.

The disagreeable odour which is characteristic of the fresh leaves disappears during the drying, and the dry leaf has a by no means unpleasant narcotic odour.

Manufacturers of asthma remedies, who are the largest buyers of stramonium leaves, obtain their consignments from the Black Sea coasts, which seem to be its home, and whence it has gradually spread over the rest of Europe. It is believed and taught that the leaves of *Chenopodium hybridum* are often mixed with those of datura, but those who have had the most varied experience with samples of the drug have very rarely come across such an admixture. The adulteration—if the mixture can be so-called—most frequently met with is the leaves of ordinary grasses, which are taken with the stramonium in careless collection. Stramonium leaves are collected in Germany by peasants, who carry them to the pharmacists. As the supply is not large, the drug is generally only collected when specially ordered, and the work of getting in the crop of datura leaves is far less remunerative than is that of some other herbs.

ADONIS VERNALIS.

This plant grows in some parts of Europe only in a limited number of places, and may be regarded as somewhat rare.

Its shining golden flowers, half hidden in the finely-divided pinnate leaves, resembling a little bouquet artistically surrounded by delicate ferns, the *Adonis vernalis* is one of the prettiest of flowers. It blossoms in the earliest spring, when only the *Anemone sylvestris* throws up here and there its delicate white corolla, vying in grace and beauty with its more resplendent golden-hued relative.

Where the *Adonis vernalis* is found it will generally be met with in quantity, though not distributed over a very wide area. At one time such spots were the haunt of the botanist only, being remote from the public roadways in quiet nooks unknown to the ordinary forest wanderer. This all changed, however, when it was announced that the little ranunculaceous plant, connected by legend with a heart-affection of another and less dangerous kind, possessed virtues that would render it valuable in the treatment of cardiac diseases.

The collection of the plant is simple enough. It takes

place just when the flowering is over and the fruit is partially developed. It is then about one foot high, and is cut off close to the ground or uprooted. The drug is thus obtained at the period of highest physiological activity.

ANEMONE PULSATILLA

grows abundantly almost everywhere, including those areas where the *Adonis vernalis* just described is found. Nature, in fact, has arranged the association and succession of the two plants very conveniently for the collector, as just as the time for taking adonis is over, the best period for the collection of pulsatilla begins. Perhaps few plants exhibit such marked variations in different districts as pulsatilla, and if the systematic botanist ever makes a hobby of this species, he might be able to establish to his own satisfaction at least a dozen distinct variations—if, indeed, he did not class them as distinct species. The whole plant is cut down and used fresh as it is for making the homœopathic tincture. The fresh juice is also expressed and used in the same department of medicine. Pulsatilla is sometimes in great demand, and in connection with this, as producing an effect upon the propagation of the whole species, we have to keep in mind that its use is of comparatively recent date, so that the methods of collection are not matters of transmission from generation to generation. Collection is, as a rule, only undertaken by express order, and the crop is almost exclusively taken up by homœopaths and proprietors of patent medicines.

FRENCH POPULAR MEDICINES.

THE contrast prevailing between French and English ideas and customs is nowhere greater than in the choice of popular or domestic remedies. To commence with the beginning, the usual introduction of the infant "mounseer" to the good things of pharmacy is the customary dose of syrup of chicory on his arrival in this world; this delectable compound contains chicory, fumitory, hart's-tongue, in combination with rhubarb and aromatics. In some cases mothers prefer syrup of peach-blossoms with almond oil. Soothing or teething powders are unknown, but in their place we have amber and anodyne necklaces to alleviate the pains of dentition, and orange-flower water seems to calm the colics to which the infantile abdomen is subject.

THE ADMINISTRATION OF ANTHELMINTICS

is curious, the popular superstition being that all infantile disorders are occasioned by the presence of worms, when Corsican moss, a mixture of several kinds of seaweeds, comes into use in the form of a decoction. Semen contra, both in its natural state and sugar-coated, is much used, but santaline has now to a great extent superseded these remnants of ancient pharmacy. A large provision of this alkaloid is always kept in stock in penny packets, and it is also much employed in the form of bonbons, lozenges, chocolate, and biscuits, the latter appealing to a better class of customers.

CASTOR OIL

is bottled in wide-mouthed phial of $\frac{1}{2}$ -oz. to 2-oz. capacity, the usual scale of doses, 2 oz. being generally regarded as the normal quantity for an adult. A Frenchman, from his invincible economy, never buys more than the exact weight that he requires for the time being; certainly the squat wide-mouthed bottles are more practical than the long-necked "castors" which form such a familiar feature in English pharmacies. As a corrective of the general health—or as a

SPRING MEDICINE,

as you would say—our children indulge in syrup of portal, a nice compound of horseradish, scurvy grass, watercresses, &c.; this last vegetable is also sold in the form of the fresh expressed juice, of which a certain quantity is taken every morning by ladies desiring to beautify their skins. Manna appears in the shape of "sorts," very coarse and cheap, and of this the consumption is enormous among the working-classes. Flake manna and mannite are reserved for the bourgeoisie. Tamarinds, which are sold as a thick,

consistent paste, containing seeds and *débris*, and the long pods of *Cassia fistula* are popular laxatives; senna is not much in demand, although the pods are used for aperient enemas. It is curious to note the great popularity that effervescent citrate of magnesia has obtained, the bulk being sold in pennyworths, only foreigners indulging in bottles. Calced magnesia, known as *magnésie Anglaise*, enjoys a great reputation, selling freely both in packets and bottled after Henry's style; lemonade, made with citrate of magnesia and flavoured with lemon or red currant, is the aperient popular with the middle class. Emetics enter largely into domestic treatment, syrup of *ipeacacuanha* (prepared from the extract) being always *en permanence*, varied occasionally by packets of the powdered root or tartar emetic. Epsom salts, known popularly as *scl d'Angleterre*, in penny packets, are in brisk demand, as also is the aerated solution of the same, supplied under the name of *eau de sedlitz*, usually put up in pint champagnes, and sold at the modest price of 60 centimes. We have

SOME CURIOUS EXTERNAL REMEDIES

which date back for a long period, such as the popular "trois poudres" (three powders), composed of resin, myrrh, and incense in fine powder; a penny packet of this is mixed with camphorated spirit and applied on tow or cotton in cases of cold, stomach ache, &c. Sometimes gum mastic is substituted for the preceding. Oil of spike lavender, locally known as *essence de St. Jean*, is employed to rub the abdomen in in the case of worms, this perfume being supposed to facilitate their expulsion. Venice turpentine plays a great rôle in patching up sprains, dislocations, &c., and as a strong rubefacient we have Burgundy pitch spread on linen, plentifully besprinkled with powdered cantharides, forming an instrument of torture worthy of the Dark Ages. Little blisters the size of a shilling (*mouches de Milan*), packed like a penny court-plaster, are very popular, and serve as revulsives in many complaints. Raspail's sedative water (*ammonia*, salt, and spt. camphor), selling at 3d. per pint, is the people's remedy for headache, congestions, &c. To Raspail we are also indebted for all the forms in which camphor has become popularised, such as cigarettes, ointments, oils, snuff, &c. Goulard water, tincture of arnica, and spt. camphor are great things in popular medicine, and are generally sold at very modest prices, many pharmacists retailing the latter preparation at 3.50f. per litre (about 1d. per fluid ounce). Menthol has not as yet come down to the people, the usual price of the cones (1f.) being too high. Cacao-butter appears in the form of neat little tablets, selling at 2 to 4 sous, and in winter is in brisk demand for chapped lips, &c., but the introduction of vaseline has greatly diminished its popularity.

OUR BABIES DO NOT INDULGE

in violet powder, nor in fuller's earth, but occasionally are gratified with a small packet of lycopodium, which is generally employed as a dusting powder for excoriations. In summer bismuth nitrate in penny packets comes to the fore as the remedy for diarrhoea, phosphate of lime occasionally, lime water being little employed except in outward applications. Rhubarb in packets also finds its place. Ointments are always popular, and ready sale is found for boxes of cold cream, cerate, mercurial, sulphur, mallow, cucumber, and a long list of others. Our people are

VERY FOND OF SWEETS,

and are great believers in their efficacy. The first place must be assigned to liquorice, which appears in every possible form—small pipe, large pipe, pill form, sticks, jujubes, &c., perfumed and not perfumed, without taking into account the numerous special liquorices put up in boxes at popular prices, say from 30 to 70 centimes, and said to be medicated with all sorts of ingredients, not forgetting the ubiquitous tar. Peppermint lozenges—English form—are great favourites, and have quite superseded the old-fashioned drops; plain jujubes are in good request, also Iceland-moss jujubes, and our old friend *pâte de Guimauve*; but in these days of competition these goods have much degenerated from their ancient excellence, and give neither satisfaction nor profit. Amongst lozenges in daily demand may be quoted chlorate of potass, kermes, rhubarb, sulphur, *ipeacacuanha*, and Vichy, and one peculiar to some districts of

the Riviera, prepared from locust beans (*pâte de carrube*) which certainly affords a very agreeable pectoral lozenge. We have no analogy with your spt. nitre, paregoric, friar's balsam, and the hundred-and-one things retailed over your counters by the one, two, and three pennyworth; but the great part played by herbs, which here replace the remedies so popular in England, must be borne in mind. Here a workman requiring a diuretic does not seek a pennyworth of spt. nitre, but wants a handful of cherry stalks, which are said to have the same effects. So with almost every complaint—there are herbs popular for the treatment of all. Lastly may be mentioned, as general favourites, the elixir of long life (*tr. aloes co.*) and German brandy (*tr. jalap. co.*) as popular laxatives.

Gazette.

PARTNERSHIPS DISSOLVED.

- Chapman, B., & Hill, B. (under the style of B. Chapman & Co.), Sheffield, mineral-water manufacturers.
 Coleman, J., & Dunn, J. H. (under the style of Coleman & Co.) Whitechapel Road, E., chemists and druggists.
 Perry, W. H., Askren, H. C., & Boulton, J. O. (under the style of Perry, Boulton & Co.), Nottingham, vinegar manufacturers.
 Rothwell & Porritt, Preston, veterinary surgeons.

THE BANKRUPTCY ACT, 1883.

Fitton, Robert, Huddersfield, chemist and druggist.—R.O.

EXTRACT FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deed of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision in the Act, making any of these arrangements binding upon dissenting creditors.

Roper, Thomas Hill (by Administratrix), late of Newent, late chemist, stationer, and beer dealer. Trustee: George White, 14 Old Jewry Chambers, E.C., accountant with a committee of inspection. Date, August 16, 1890; filed, August 21, 1890; unsecured liabilities, 1,480l. 17s. 7d.; estimated net assets, 952l. 7s.

	£	s.	d.
Allsopps & Co. (Limited), Burton-on-Trent..	35	0	0
Altan Court Brewery Company (Limited), Ross ..	292	0	0
Bailey, R. B., & Co., Gloucester	13	0	0
Barron, Harvey & Co., London.. ..	13	0	0
Barton Brewery Company (Limited), Burton-on-Trent	12	0	0
Cattle, Mrs., Cheltenham	18	0	0
Chance & Bland, Gloucester	24	0	0
Colthurst & Harding, Bristol	150	0	0
Cooper, Son & Nephew, Berkhamstead	13	0	0
Dean, Horace, Dymock	15	0	0
Evans, Leseher & Webb, London	12	0	0
Hall, J., & Co., London	50	0	0
"Hereford Times," Hereford	14	0	0
King, Jonathan, London	15	0	0
Maw, Son & Thompson, London	18	0	0
Meats & Son, Colwall	14	0	0
Pellifer, Mrs., Malmesbury	19	0	0
Prue, O. T., Newent	50	0	0
Rock Bros., London	28	0	0
Roper, Mrs. S. D., Newent	140	0	0
Sanger, J., & Son, London	62	0	0
Schweppe, J., & Co. (Limited), Bristol	15	0	0
Smith, Mark, Louth	13	0	0
Southall Bros. & Barelay, Birmingham	27	0	0
Stoneman & Co., London	14	0	0
Terry & Co., London	72	0	0
Thompson, Walters, Hole & Co., London	23	0	0
Thurston, Mrs., Newent	37	0	0
Watt, Mr., Swindon	15	0	0
Wellington, Messrs., Gloucester	11	0	0
Wills, W. D. & H. O., Bristol	30	0	0

PHOTOGRAPHIC NOTES.

(Written for THE CHEMIST AND DRUGGIST.)

CELLULOID.

The Eastman Photographic Materials Company prepare their sheet-celluloid as follows: 9,000 grains of pyroxylin or nitro-cellulose and 5,400 grains of camphor are dissolved in 112 ounces of methylated spirit and 28 ounces of fousel oil, 7 ounces of amyl-acetate added, and a gentle heat applied. Glass plates are coated with a solution of yellow wax in benzol and polished, and then washed with water, to which about 2 or 3 per cent. of silicate of potash or soda is added. The whole is allowed to dry, and the solution of pyroxylin is coated on the plate and allowed to dry. A coat of sensitive emulsion is then applied, and, when this is dry, the whole is stripped. The thickness of the celluloid film is from $\frac{3}{1000}$ to $\frac{5}{1000}$ of an inch.

"PENNY-IN-THE-SLOT" PHOTOGRAPHIC MACHINES.

Judging from the advertisements, these are supposed to be the very farthest advance yet made in photography; but it is curious to note that in all the reports of the machine not a single photographic journal's or expert's opinion is given. The basis on which the probable (?) profits are based are, to anyone conversant with photography, to say the least, biassed. The old tin types and the wet collodion process are to be used, and anyone who has worked with this process knows how much depends upon the state of the bath, the collodion, and the thousand-and-one little details, so that the attainment of success by an automatic machine seems almost too good to be true.

A NEW NON-ACTINIC SOLUTION.

Someone who knows too much or too little has suggested a mixture of sulphate of quinine, chloride of cobalt, and sulphate of nickel as a non-actinic solution for dark-room windows, giving as a reason for its use that sensitised paper will not become coloured when exposed, behind this white solution, to a week's daylight. No doubt some amateur will see the formula, and inquiries may be made for it. It will be just as well to point out that the solution is almost as actinic as bright sunlight to a bromide plate, or at least, if this solution were actually non-actinic, ordinary gelatino-bromide dry plates might be manipulated in gas-light with perfect safety, as gas-light has no action on albumenised paper. Truly "a little knowledge is a dangerous thing."

A NEW HAND-CAMERA.

An excellent hand-camera has just been introduced into the English market by Messrs. Mawson & Swan. It is a neat walnut box, 5 x 5 x 6 in., weighing, with lens, and three loaded dark slides, just 4 lbs. On the top of the box is a ground glass of the full size of the plate, on to which the image is projected by means of a mirror placed behind the lens at an angle of 45°, the lens being provided with a rack and pinion to enable focussing to be effected, the range of distance for sharp focus thus extending from 6 feet to infinity. The shutter is a roller-blind working directly in front of the plate which may be set, the speed of the same lowered or increased whilst the plate is ready for exposure—a very important advantage—the speed varying from about $\frac{1}{4}$ sec. to $\frac{1}{250}$ sec., although the shutter may be fitted to work to $\frac{1}{1000}$ of a second without increase of weight or size. This is the only form of shutter which allows the lens to act with full aperture during the whole of the exposure—another important advantage over all other kinds of shutters. The shutter may also be obtained for fitting to ordinary cameras, and we should advise dealers to take up and push the same as the ideal shutter. The camera submitted to us is for hand use, with the lens on the outside, but it may also be obtained fitted in a box to be less conspicuous. The lens is one of the famous "Optimus," 5 x 4 R.R., the working powers of which are excellent. We have given the camera an extended and exhaustive trial, and can speak very highly of it.

CHLORIDE OF GOLD FOR PHOTOGRAPHIC USE.

Chloride of gold, or the perchloride or terchloride of gold, or auric chloride, $\text{AuCl}_3 = 302.5$, may be practically considered to be the basis of the toning process for improving the tone or colour of the silver print. The method usually suggested for making chloride of gold is by dissolving a coin such as a sovereign or half-sovereign in aqua regia, evaporating to free from superfluous acid, and keeping the salt in solution. The disadvantage of this process is that the solution thus obtained is actually richer in chloride of gold than the commercial salt. The following, however, will enable anyone to make his own chloride of gold, and thus effect a slight saving:—Mix 2 drachms of pure nitric acid with 8 drachms of hydrochloric acid, and place in the mixture a new sovereign or its equivalent of pure gold; gently heat the mixture in a sand or water bath; copious evolution of gas will follow, and the gold will gradually disappear, forming acid solution of perchloride of gold. We obtain a solution of auric chloride, which should be evaporated to dryness on a water-bath, yielding a bright lemon-yellow salt, which, if much excess of hydrochloric acid was used, has the formula $\text{AuCl}_3 \cdot \text{HCl}$. This salt deliquesces in the air, but effloresces if kept in absolutely dry air. It should be again dissolved in water, and the solution filtered, or carefully decanted from any existing deposit, which will be chloride of silver if standard gold has been used, and probably also some aurous chloride; the solution is again evaporated to dryness, and finally the crystals are heated to 150° F., when deep orange-red crystals of $\text{AuCl}_3 + 2\text{H}_2\text{O}$ are obtained. Practically, however, it is unnecessary to evaporate to dryness if the acid solution of gold be evaporated until the excess of acid has been driven off, and the solution measures a definite quantity. For instance, a sovereign contains 113 grains of pure gold, which is equivalent to 174 grains of auric chloride; it is only necessary to make the solution measure 174 drachms, when we have an acid stock solution which contains one grain of chloride of gold in every drachm. This faintly acid solution will keep for a considerable time in the dark, and may be neutralised before use by the addition of chalk, magnesia, or soda, with the formation of double salts, which have the formula $\text{KClAuCl}_2 \cdot \text{H}_2\text{O}$. But in working in this way we are practically giving our customers more than they are in the habit of obtaining elsewhere, as this solution may be considered to contain about 64 grains of pure gold in every 100 drachms, whereas the commercial salts are never so rich. To bring our solution down to the commercial standard, we must reduce the proportion of gold by increasing the bulk of the solution. The commercial salt is usually the chloride of gold and sodium, $\text{AuCl}_3 \cdot \text{NaCl} \cdot 2\text{H}_2\text{O}$, and is usually made by dissolving 4 parts of gold in aqua regia, evaporating to dryness, and dissolving the mass in 8 parts of water, adding 1 part of chloride of sodium, evaporating to half its bulk, and allowing to crystallise. The resulting salt contains 49 parts of gold to every 100 parts, and 131 parts are equal to every 100 of the above-mentioned pure solution of chloride of gold. Therefore we must dilute 100 of our pure solution to 131 parts, and neutralise the acidity with carbonate of soda to make it equal in strength to commercial chloride of gold. Reckoning out the cost of making this solution, and comparing it with the salt bought wholesale, we shall see the advantage, if any, in thus using our own time and materials:—

Home-made Solution.

	s.	d.
1 sovereign	=	20 0
Acids and salt		0 0½
Gas		0 5½
Total		20 6

—for 174 grains of pure chloride of gold = 228 grains of chloride of gold and sodium. The commercial salt, at the rate of 19s. per dozen tubes of 15 grains each, will cost 24s. 1½d. for the same amount. We have placed the cost of gas at 5½d. to make an even amount, but hardly as much would be required, and this gives us a saving of 3s. 7½d. on every 228 grains, or about 1½d. on every 15 grains.

"AN IMPORTANT DISCOVERY" IN SILVER PRINTING.

Mr. Edward A. Golledge has made "an important discovery" in silver printing—viz., that by using plain or matt-surfaced silver paper and printing under green glasses and toning with a mixed uranium and gold bath, prints are obtained rivalling platinotypes in blackness. The only unfortunate part of this "important discovery" is that printing through green glasses was first suggested by Lemann in 1861, and revived by Mr. F. A. Bridge in 1873. The action of a combined uranium and gold bath in giving black tones has been known since about 1867, when it was specially recommended by Notman.

SACCHARIN IN THE TONING-BATH.

Truly some workers seem only too pleased to make hotch-potch of their developers, toning-baths, &c. Saccharin is the latest addition to the toning-bath, and its proposers promise permanent silver prints, finer tones, and easier toning—all by the addition of 1 grain of saccharin to every grain and a half of gold, as in the following formula:—

Chloride of gold	15 grains
Acetate of soda	30 "
Saccharin	"
Distilled water	10 oz.

From experiments we have not found the addition of any benefit, and if there is any, it is due entirely to the carbonate of soda added to the saccharin to render it soluble.

COLOUR SENSITIVE PLATES.

As is well known, there are commercial colour sensitive plates, which are called "Isochromatic," or "Orthochromatic," plates. The French *savants* suggest "Othoscopie" as the more correct word, and the Austrian word is "Orthoskiagraphische." Vogel's azaline plates are the best red sensitive plates, but they are dyed with a mixture of chinoline red and chinoline blue or cyamine. The latter salt does not keep well, and is very dear, and therefore M. Leon Vidal has suggested a mixture of indophenol and malachite green, neither of which is a novelty, though a mixture of the two is new. Considerable attention has lately been drawn to rhodamin as a sensitiser for yellowish green and yellow. This dye may be obtained from the Atlas Dye Works, Hackney Wick, N.E., at about 15s. per lb. A convenient solution is prepared by dissolving:—

Rhodamin	1 gramme
Distilled water	1,000 c.cm.

For sensitising the plates—

Above solution	10 c.cm.
Liq. ammoniac	10 "
Distilled water	200 "

Dust the plates and bathe for 2 minutes in above solution, and dry in absolute darkness.

AN OLD REDUCER IN A NEW FORM.

The beautiful emerald-green crystals which separate out from old ferrous oxalate and old platinotype developers, which crystals are potassium ferric oxalate of the formula $\text{Fe}_2\text{K}_2(\text{C}_2\text{O}_4)_6 + 6\text{H}_2\text{O}$, form a very efficient reducer when mixed with hypo-solution, and its general use has no doubt been prevented by the fact that the solution soon becomes thick and useless. M. Belitzki has suggested the following modification, which will keep for many months in the dark:—

Potassium ferric oxalate	10 grammes
Sodium sulphite pure	8 "
Oxalic acid powdered	2½ to 3 "
Hypsulphite of soda	50 "
Distilled water	200 "

Dissolve in the above order, and keep in the dark. When the potassium ferric oxalate is dissolved and the sodium sulphite added, blood-red ferric sulphite is formed, which is again reduced to green ferric oxalate on the addition of oxalic acid, only enough acid being added to effect this purpose. On the addition of hypo, this colour remains unchanged. Solution of potassium ferric oxalate alone has no action on

the reduced silver of the image, nor has solution of hypo, but in a mixture of the two the silver is oxidised at the expense of the ferric oxalate, which is converted into ferrous oxalate, shown by a change to a yellow colour, and the silver dissolves in the hypsulphite with formation of the double hypsulphite of silver and soda.

IRON PRINTING.

Printing with salts of iron was suggested by Sir John Herschel in 1842, and whilst this method of printing is less used by amateurs than other processes, it finds a wide application in the preparation of architects' plans and drawings, and might well be used by chemists for the preparation of copies of difficult prescriptions, as the paper may be easily prepared without any great outlay, and the copies with very simple treatment furnish perfect and faithful reproductions of the original without the disturbing influence of any personal equation which may affect the copying of the hieroglyphic characters. One of the most beautiful of all the printing processes is that known as "Cyanotype," or "Ferroprussiate," the directions for which are given on p. 146 of the Summer number of THE CHEMIST AND DRUGGIST; the only improvement we can suggest is to use albuminised paper (not sensitised), and float the same on boiling water, so as to coagulate the albumen and remove the "salting," and then treat with the iron solutions dry, and expose as usual. This gives prints of a fine surface, with excellent firmness of detail. To obtain copies of prescriptions it is only necessary to place the prescription in a printing-frame provided with a sheet of glass, and place on the prescription a sheet of sensitised paper and expose to sunlight for about a quarter of an hour, or to diffused light for about three-quarters of an hour, when the print is washed and dried. This process gives, however, white lines on a blue ground when exposed under a prescription. To obtain an exact copy with black lines on a white ground, the following process should be employed. A solution is prepared as follows:—

Ferrous sulphate	10 grammes
Ferric chloride	20 centigrammes
Gelatine	10 grammes
Tartaric acid	10 "
Distilled water	to make 350 c.cm.

The gelatine is first soaked in the water and dissolved with a gentle heat and then the other ingredients added. Paper is coated with this and dried, and exposed under the prescription till the ground appears white, when the print is developed by floating on a solution as follows:—

Gallic acid	2 grammes
Alcohol	10 c.cm.
Water	90 "

when the writing appears as black lines on a white ground. The print is then washed in plain water and dried.

Obituary.

EVANS.—On August 25, suddenly, at Bronwylla, near Wrexham, aged 68 years, Margaret, wife of Edward Evans, Esq., J.P., head of the firm of Evans, Sons & Co., wholesale druggists, Liverpool.

FONTANET.—The death, on July 17, is reported of Don José Antonio Abadal y Fontanet, a distinguished Spanish pharmacist.

FORRESTER.—On August 18, Mr. Richard Hammersley Forrester, chemist and druggist, Merthyr Road, Aber-gavenny. Aged 56.

WOODWARD.—On July 6, at Adys Road, East Dulwich, Mr. Charles Woodward, chemist and druggist, formerly of Ryde, Isle of Wight. Aged 66.

CHLORAL-ACETONE is the latest antipyretic. Mr. Vice-Consul Ladenburg, of Mannheim, invents it in his last report. His namesake, the professor, could not have done that.

Practical Notes and Formulae.

ESSENCE OF LEMON.

TAKE the grated rinds of 25 fairly large lemons, and macerate for twenty-four hours in a mixture of 50 oz. of rectified spirit and 120 oz. of water; then add 10 drops each of oil of lemon and oil of sweet orange, and distil 125 oz. Set this aside for eight days, shaking occasionally, and filter. This essence mixes clear with syrup and water. The flavour can be improved and the colour heightened by adding to it $1\frac{1}{2}$ grain of vanillin, and 1 drachm each of tincture of turmeric and purified caramel.

INK FOR WRITING ON ZINC.

DIETERICH gives the following as a reliable formula:—

	Parts
Chloride of potassium	3
Sulphate or copper	6
Distilled water	70

Dissolve, and mix with the following:—

Aniline blue (water soluble)	$\frac{3}{10}$
Dilute acetic acid	5
Distilled water	20

DEODORISATION OF NAPHTHALIN.

NAPHTHALIN has such a disagreeable odour that its use in medicine and surgery is considerably retarded thereby, and it has been found that the mixture of camphor and other deodorants with it is only of temporary benefit. But if the naphthalin be mixed with some benzoin, and then sublimed, the sublimate of naphthalin is free from tarry odour and is pleasant to smell; moreover, it retains this pleasant odour, although this is not the case when the naphthalin is simply mixed with tincture of benzoin or benzoic acid.

TOOTHACHE DROPS.

Chloroform	1 oz.
Oil of cloves	2 drachms
„ peppermint	$\frac{1}{2}$ „
„ spearmint	2 drops
„ sandalwood	15 „
„ cajeput	4 „
Tincture of cassia	$1\frac{1}{2}$ oz.

Mix these, and add to 1 oz. of a tincture containing 20 grains of catechu in 1 oz. of absolute alcohol. This formula is based on the composition of a celebrated Continental remedy.

SCHILLBACH'S CHOLERA DROPS.

A CORRESPONDENT of the *Phar. Zeit.* gives the following as the original recipe:—

	Parts
Tincture of angelica	2
„ calamus	2
„ cloves	1
„ cubeb	1
„ cinnamon	1
„ opium	2
„ saffron	2
Proof spirit	11

Mix.

TINCTURE OF KINO.

NONE of the so-called methods to prevent gelatinisation can be entirely relied on, and the editor of the *Pharmaceutical Record* calls attention to the fact that it can be made extemporaneously without any trouble or delay. It only needs that into a test-tube or small flask be placed a portion of the fluid solvent, drop in the kino in pieces, heat gently, pour off and repeat the heating with the balance of the liquid. Kino readily dissolves, and the operation does not cause more than three minutes' delay. For 1 oz. of the tincture take the following proportions (which make a little more than is needed): Kino, 50 grains; glycerine, 75 minims; S.V.R., 300 minims; water, 125 minims.

ROSE POMADE.

Lard	3 lbs.
Spermaceti	3 oz.
Almond oil	3 „
Otto of rose	30 drops
Oil of rose geranium	30 „
bitter almonds	30 „

Colour with alkanet.

OLEATE OF MERCURY.

DR. A. B. HUESTED, in a paper read to the New York State Pharmaceutical Association, gave it as his opinion that Dieterich's process is preferable to most processes. The yellow oxide is first rubbed with an equal weight of alcohol or ether to a smooth paste, and the oleic acid is added and stirred till thoroughly mixed, then stirred occasionally during twenty-four hours, when an almost complete solution results. Heat is then applied to evaporate the alcohol, but care is necessary not to carry it too high. Much of the alcohol must be evaporated during the solution, and where ether is used a still greater proportion is evaporated, and no harm would result if heat were not applied, and the danger of decomposition would thereby be entirely avoided.

SYMPATHETIC INKS.

AMONGST the inks which appear on heating the manuscript are the following:—*A*, a concentrated solution of caustic potash. *B*, a solution of muriate of ammonia, in the proportion of 15 parts to 100. *C*, a weak solution of nitrate of copper (becomes red through heat). *D*, a very dilute solution of perchloride of copper (becomes yellow through heat). *E*, a slightly alcoholic solution of bromide of copper gives perfectly invisible characters, which are made apparent by a gentle heat, and which disappear again on cooling. *F*, write upon rose-coloured paper with a solution of chloride of cobalt; the invisible writing will become blue through heat and will disappear on cooling. The juices of lemon, onion, leek, cabbage, and artichoke may also be used as invisible inks, all giving good characters when the paper is warmed.

PRESTON SALTS.

AT the meeting of the Massachusetts Pharmaceutical Association recently Mr. William W. Bartlett told his fellow-members that he had found the following formula for smelling-salts to be quite practical everything to be desired. A sample was submitted which had been made several weeks, and it was still quite pungent:—

Powdered chloride of ammonium	$1\frac{1}{2}$ oz.
„ carbonate of potassium	1 oz. 6 drachms
„ camphor	1 drachm
Coarse-powdered carbonate of ammonia	3 drachms
Oil of clove	10 drops
„ bergamot	10 „

Mix.

Another was sample, made with 1 drachm of menthol in the place of the essential oils, this making a "menthol pungent," which Mr. Bartlett says is quite agreeable to the smell and quite a novelty for various kinds of headache and faintness.

RASPBERRY SYRUP.

DIETERICH recommends the following process of preparing this syrup:—Bruise 1,000 parts of raspberries, allow the pulp to stand during two days at the ordinary temperature, and then express the liquid portion. Add to this 20 parts of powdered sugar, and when it is dissolved fill the juice into narrow-necked bottles so as to reach up to the neck; put parchment-paper over their mouths, and allow to ferment at indoor temperature until no more carbonic acid gas is given off, or until a sample of the juice is no longer rendered turbid when mixed with half its volume of alcohol; then filter. Next heat 500 parts of sugar in 330 parts of distilled water, so as to obtain a product of 580 parts; add $7\frac{1}{2}$ parts of citric acid, and afterwards 450 parts of the filtered juice. Raise once to boiling, skim carefully, and strain through flannel.

Trade Notes.

MESSRS. BLONDEAU & Co. have brought out a new "gem" show-card, bearing simply the words "Vinolia Soap," which is reflected in brilliant varied tints on a grey ground, and is very effective. They will supply one of these show-cards to any chemist who applies for one.

MESSRS. BURGOYNE, BURBIDGES, CYRIAX & FARRIES have taken the agency for "the harmless" headache-powders and "harmless" liver-pills, made by the Hoffman Drug Company, of Buffalo, and they are supplying as free samples a single dose of each.

MR. ALFRED WOOD, representing Mr. Vincent Wood, surgical appliance manufacturer, of 3 St. Andrew Street, E.C., is proceeding to America to show his manufactures. He may be addressed, care of Mr. A. E. Pressinger, 111 Broadway, New York.

MESSRS. G. & G. STERN, of 62 Gray's Inn Road, are offering to supply chemists with free samples of their new digestive salt, "Pepsalia," for distribution among the medical men of any district. They will also supply literature concerning the preparation.

MESSRS. R. W. GREEFF & Co., of 29 Mincing Lane, announce that Mr. Hugo Greeff and Mr. Arthur Greeff have ceased to be connected with the spice, cocoa, and drug departments of their business. They also state that Mr. George Kahler has authority to sign for the firm by procuration.

THE LIQUOR CARNIS CO. (LIMITED) inform us that they offer to send to retailers of their liquor one of the porcelain memorandum tablets which we mentioned in our report of the British Medical Association meeting. Those who do not stock the liquor will get one of the tablets by paying the postage, 3d. We may say that the tablets can be used as a paper-weight and a pen-rest as well as for memoranda.

MR. HENRY SELL, the advertising agent, of Fleet Street, has produced a sixth volume of his "Directory of Registered Addresses." In this volume there is an increase of 50 per cent. in the number of the telegraphic addresses quoted as compared with the last edition. The list fills over 600 pages, and, considering that it has been compiled without any assistance from the Post Office authorities, great credit is due to the publisher. In addition to the directory, a telegraphic code has been compiled covering most of the expressions used in commerce. The price of the volume is 5s.

PHILLIPS & Co. (LIMITED), BOMBAY.—At the fifth annual meeting of shareholders in this firm, held on July 12 last, the directors submitted the balance-sheet and accounts for the year ending February 28, 1890. The results of the trading showed that a heavy loss had been sustained during the year's working. The balance at debit of profit-and-loss account was Rs. 64,323-10-7. A portion of this loss, amounting to Rs. 24,532, was attributable to the previous year, as it had been ascertained on investigation that the Poona stock was entered in the previous accounts at Rs. 180,788 instead of Rs. 156,256, the correct amount. The figures submitted by the Poona manager were correct, and the error appears to have been committed in Bombay and to have escaped the attention both of the Bombay manager and of the auditors. Mr. Phillips has now taken over entire charge of the Bombay business, and nearly the whole of the Bombay staff has been changed. A good business is now being done in Bombay and Poona, and it is hoped that the losses incurred will soon be recouped. The building of the new premises at Byculla is being proceeded with. The chairman, in submitting the report for adoption, said that the directors were obliged to come to the conclusion that the stock-list of the Poona branch had been falsified. At the time these mistakes occurred, he and Mr. Phillips were in England, and it was only when Mr. Phillips came out that it was discovered that the business was being carried on on a most expensive scale. The report was adopted. Messrs. D. Gostling and A. C. Walker were re-elected directors of the company, Dr. Langley being elected an additional director in the place of Mr. Kirkbride, who had retired.

Personalities.

MR. JOHN BIRD has purchased Mr. C. G. Breadner's business at 77 York Street, Cheetham, Manchester.

MR. WILLIAM MARTINDALE, F.C.S., is to deliver the inaugural address to the Sheffield School of Pharmacy, on October 9.

MR. OSWALD A. READE, dispenser at the Plymouth Hospital, has been appointed to Malta Naval Hospital in charge of stores, vice Hart, invalided.

MR. C. W. MAGRANE, Darlaston, has been appointed dispenser at the Dudley Dispensary, vice Mr. Sanders, resigned. The post is worth about 170*l.* a year.

MR. J. SWENDEN, pharmaceutical chemist, of Darlington, has transferred his business to Mr. John Clare, late a partner in the firm of Clare & Hunt, chemists, Scarborough.

PROFESSOR EYKMAN, formerly of the University of Tokio, and well known as an investigator, has been appointed to the Leyden chair of pharmacy and toxicology, vacant by the death of Dr. van der Burg.

PROFESSOR ATTFIELD, F.R.S., has been unanimously elected an honorary member of the Georgia Pharmaceutical Association. A glance at the title-page of the last edition of Dr. Attfield's "Manual of Chemistry" will show that this is the twentieth honour of the kind that he has received from the various countries of Europe and America.

MR. EDWARD TURNER, of Newcastle-under-Lyme, has presented a second handsome town clock to his native town, which has been fixed in the clock-tower of the new municipal buildings. The previous clock which he gave is erected in another part of the town. The clock was set going by the Mayor at one minute to twelve on August 19. In recognition of Mr. Turner's valuable gifts to the town a number of prominent gentlemen have presented him in return with an illuminated address, a silver cigar-case, suitably engraved, and an oil-painting of himself.

WHERE IS MR. BROUGHTON?—Mr. Broughton, formerly the Government quinologist at the Government cinchona plantations at the Nilgiris, disappeared from his post sixteen years ago, and has never since been definitely heard of. He went to India in 1866 with very high scientific qualifications; he held the B Sc. degree of the London University, and had distinguished himself at the School of Mines and at the Royal Institutions. His varied and complete analyses were most useful in assisting the early cultivation of cinchona on the Nilgiris, and his investigation into the change of the alkaloids in the bark was complementary to botanical and horticultural work carried on by Mr. W. G. McIvor. In 1871 Mr. Broughton attended in Calcutta a commission to inquire how the supply of bark from the Indian plantations might be best utilised, and on his return to Ootacamund he entered with heart and soul into a method for extracting the febrifuge alkaloids from the cinchona bark. Naturally enough his early results were not profitable, and a committee recommended the work to be discontinued, and somewhat severely criticised his labours. Mr. Broughton appears to have taken umbrage at what he called interference, and, without any notice or preparation, he tendered his resignation and disappeared. Some four years later it was reported that he had been met with at Colombo, but we do not know that this report was confirmed. His Madras friends, who much esteemed him, believe he is still living, and a little article lately published in the *Madras Mail* which has been brought to our notice shows that Mr. Broughton is still kindly remembered and would be heard from gladly.

SHORTER HOURS.—It is not difficult to see, writes the *Pharmaceutical Era*, that sometime, perhaps at no distant day, the demand from assistants for shorter hours, less arduous labour, and fairer remuneration will come with such force as to compel submission thereto. If drug-stores must be kept open sixteen or eighteen hours a day, it should be accomplished by relays of assistants, not compelling the assistant, often the employer, to be constantly on duty.

CANADIAN NOTES.

Mr. A. E. FUGE, late buyer for Messrs. Evans, Sons & Co. (Limited), Montreal, has secured a prominent position with The Lyman, Eleil Drug Company, of Minneapolis, one of the largest Western wholesale drug houses. Mr. Fuge is a nephew of Mr. A. H. Mason, London, England.

PERSONAL.—Mr. W. J. Mitchell, a popular Winnipeg druggist and a member of the Manitoba Pharmaceutical Council, has left that city for Toronto. On the occasion he was feasted by his colleagues, and his late employers made him a handsome present.

FIRES.—Mr. W. H. Chapman's branch store in Montreal has been completely destroyed by fire, which at the same time also damaged another branch drug-store belonging to Mr. H. F. Jackson.—An assistant to Messrs. Laing & Fleming, chemists, Windsor, Ont., recently went to get some spirit from the cellar. He had a lighted lamp with him, and the alcohol vapour exploded and set fire to the assistant's clothes, badly burning him before a hose-pipe put out the flames.

MEDICINE HAT, N.W.T.—Mr. Alvert Hughes, a chemist and druggist of Great Britain, has purchased Dr. Olver's drug business in this quaintly-named town. Mr. Hughes was a partner with Dr. Brett in the drug business of A. Hughes & Co., at Banff, and was formerly in Wolverhampton, England. Medicine Hat, it may be stated, is situated on the Canadian Pacific Railway, at the confluence of the South Saskatchewan and Seven Persons rivers, 660 miles west of Winnipeg, and 800 miles from the Pacific coast. The town is the centre of the great cattle and sheep raising district of the North-West.

BRANCH SHOPS IN MANITOBA.—The case mentioned in THE CHEMIST AND DRUGGIST of July 26 has been settled by the magistrates of Winnipeg, who fined the defendants \$20 and costs. The defendants were Mr. Walter Pulford and Mr. George E. Duncan. Mr. Pulford has a branch store in Main Street, Winnipeg, and Duncan was his assistant, but he was not qualified, and the law requires branches to be under the charge of duly registered pharmaceutical chemist. Mr. Pulford therefore acted contrary to the law, and as Duncan had dispensed a prescription, he was charged with this offence; only certified clerks and pharmaceutical chemists being authorised to compound medical prescriptions.

WHOLESALE DRUGGISTS PROTEST AGAINST THE ALCOHOL TAX.—The wholesale druggists of Canada met in Toronto, on August 8, under the presidency of Mr. R. W. Elliott, to protest against the alcohol tax. After dealing with certain questions of trade, such as credit, risks, cartage, &c., the price of and duty on spirits used in the arts and medicine were taken up, and, as the result of a long discussion, it was resolved to take active steps to get the amount of the duty reduced, and to get the regulations amended which require potable spirit to be kept two years before being sold, as they are wholly unnecessary in the case of spirits required for chemical industrial purposes, and have been used to create what is practically a monopoly. The direct effect of the present state of affairs has been, the meeting resolved, to increase the price to the sick of a large number of medicines, at a time when they can least afford to pay a tax only intended to be collected on luxuries. It has destroyed many promising chemical industries, and prevents the development of many of the higher branches of technical arts and manufactures. Messrs. George Rutherford, John Henderson, A. B. Evans, J. W. Knox, Wehh, and James Douglass were appointed to draft an agreement between druggists willing to buy monthly specified quantities and distillers who will supply them at equal rates for all. At the same time Messrs. R. W. Elliott, John Kerry, Henry Lyman, and A. B. Evans were asked to bring the whole question before the Government.

AMERICAN CASTILE SOAP.—If the cottonseed-oil crushers of the States live long enough they will persuade themselves that the olive and cotton plants are the same thing. We are told that their latest move is to erect plant for the manufacture of castile soap and olive oil at Tredegar, Alaska, in connection with the cottonseed-oil mill there.

THE MANUFACTURE OF HYDROGEN DIOXIDE.

By A. BOURGOUNON.

IN 1878 I manufactured hydrogen dioxide on a commercial scale, and the following is a description of the method I adopted for the preparation of this bleaching compound:—

The first step, and a very important one, is the hydration of the barium dioxide. Into a suitable vessel—an ordinary cylindrical stone pot, about half full of water—the powdered dioxide is slowly poured, the mixture being well stirred with a wooden spatula during this operation, and continued after its completion for about twenty minutes. Then the mixture is left alone and stirred, every half-hour or oftener for about ten minutes, until the hydration is completed. This operation requires from three to four hours; the barium dioxide forms then a thick, perfectly white and smooth, pasty mass, resembling white clay mixed with water.

While the hydration is progressing, a mixture of water and hydrofluoric acid is made in a vessel lined with sheet lead, and surrounded with ice or simply with water in which lumps of ice are placed from time to time so as not to allow the temperature of the acid mixture to rise above 10° C. during the operation.

All things being properly disposed, the hydrated barium dioxide is added in portions of three to four pounds at a time to the acid mixture, stirring all the time to mix the contents of the vessel thoroughly. All the barium is transferred to the acidulated water in about two hours, and the agitation continued for four hours. If the operation has been well conducted, all the barium dioxide is transformed into fluoride, which falls to the bottom of the vessel. When this precipitate is well settled, the supernatant liquid is decanted into a vessel similar to the one used for its production, and also surrounded by ice-water. The clear liquid contains an excess of acid and impurities derived from the materials employed; its colour is yellowish, and it must be purified to ensure its keeping properties.

The impurities which are to be removed are chiefly ferric oxide, alumina, and manganese oxide. To the cold solution of impure hydrogen dioxide small quantities of hydrated barium dioxide are added at a time and well stirred. When the last traces of acid are saturated, the appearance of the liquid suddenly changes: from a bright yellow it turns to a greyish colour, and the impurities are separated and collect at the surface of the liquid.

Without losing time, the liquid is filtered through a cheese-cloth stretched on a frame, and received in a vessel which contains a small quantity of sulphuric acid diluted with eight to ten times its volume of water (acid, 1 oz.; water, 8 to 10 oz.). This filtration must be quickly done. As long as the solution is alkaline, there is great danger of decomposition and loss of oxygen. If the liquid is thrown upon the filter, the latter will be quickly clogged, the filtration stopped, and the hydrogen dioxide will rapidly decompose, emitting large bubbles of oxygen with a hissing noise; but as the precipitated impurities collect first on the top of the liquid, if the solution is syphoned from below these impurities, the liquid filters quickly and satisfactorily.

The filtered liquid is tested for barium, and sulphuric acid is added to it until all is removed. The liquid is left overnight, the precipitate of barium sulphate settles, and the perfectly clear and colourless liquid is ready for the market.

All the precipitates are separated by pressure from the liquid they may contain, and the liquid so obtained is added to the water employed in the next operation.

I employed the following proportions:—

Barium dioxide	60 lbs.
Hydrofluoric acid	25 "
Water	40 gallons

and obtained nearly 40 gallons of hydrogen dioxide. The strength of the acid was about 33 per cent.—*Journal of the American Chemical Society.*

THE TOXIC EFFECT OF COCAINE is said, by Dr. Isidor Gluck, to be prevented by adding for every 10 grains of cocaine salt 2 grains of phenol to the solution. In no case has Dr. Gluck had toxic effects with solution so made.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c.
Original, Selected, and Translated.

ECONOMIC AND RAPID PREPARATION OF ARISTOL.

DI-THYMOL BINIODIDE may, according to M. Louis Boulé (*Report. de Pharm.*), be prepared in the following manner: Make a solution of thymol 5 grammes, caustic soda 5 grammes, and potassium iodide 5.8 grammes, in enough water to make a 50-c.c. solution with the aid of heat. When the solution cools, add it to 250 c.c. concentrated solution of sodium hypochlorite (liquor de Labarraque), and shake thoroughly. In about fifteen minutes the reaction is complete, and the aristol may be collected on a filter, washed with distilled water, and dried in the dark.

ACTIVE PRINCIPLES OF HOREHOUND.

A NOTE on the constituents of horehound by John W. Morrison, of the Philadelphia College of Pharmacy, supplements the particulars given by Mr. F. G. Hertel regarding the precipitation of marrubiin in fluid extract of the drug. According to Hertel, the fluid extract was just as bitter without the marrubiin as it was with it, and this is accounted for by Morrison, who states that there are two bitter principles besides marrubiin. One of these is a very bitter greenish substance, with a narcotic odour, and was extracted from the methyl alcohol residue by ether. The second was extracted with chloroform, and is a brownish substance with a bitter and pungent taste. Both gave negative results when tested for alkaloids, and both reduced Fehling's solution, especially after heating with dilute acid, during which process each developed a peculiar aromatic odour.

TESTING PANCREATIN.

PANCREATIN in powder is sometimes perfectly inert, and it is desirable, as in the case of pepsin, to ensure that the powder is active before it is used medicinally. A good way of testing it is to take 5½ grains of the pancreatin, and add to it 3½ ounces of water, stir frequently during an hour and then test the reaction of the fluid with test-paper. If it is acid, add solution of sodium bicarbonate very carefully until it is exactly neutral. Then dilute the fluid to 4 fluid ounces, and filter off about one ounce of it. Now heat a half-pint of fresh milk to 105° F., and measure off four portions of 1, 1½, 2, and 2½ ounces, and put in bottles marked A, B, C and D. These four samples of milk are now to be placed in a pan of water, heated to 105° F., and kept at that. Warm the pancreatin solution to 105° F., and add one fluid drachm of it to A, and stir it in. After five minutes, add the same to B, and stir as before; in another five minutes the same to C; and after another interval to D. Now immediately take out two drachms from A and boil it, and do this with the others at intervals of five minutes. It will be found that a very good pancreatin will have altered the milk so that on boiling all of the samples will curdle. A good pancreatin will have curdled A, B and C. A mediocre pancreatin will have curdled A and B. A poor pancreatin will have curdled A. Only a very poor pancreatin will have curdled none of the samples. Now allow the remnant of the milk samples to remain in the pan for an hour or two longer, or until the whole becomes cold. No attention is needed, but after the time has passed note their odour and taste. These should not be unpleasant. Should it be so, *New Idea* says, the pancreatin, though it may be powerful, is still unfit for use.

CONSTITUENTS OF INSECT-POWDER.

M. LACOUR EYMARD communicates to *L'Union Pharmaceutique* the results of an investigation which he has concluded on Dalmatian insect-powder, the object being to ascertain why some powders of commerce differ from the proprietary powders. A portion of the powder was first submitted to the ordinary process for the distillation of essential oil, and a distillate was obtained which was opaque owing to the presence of a very small quantity of essential oil, possessing the characteristic odour of the flowers. Some bugs and ants were put along with a portion of this odorous substance under a bell-glass, but after eight hours they were

as lively as ever, entirely unaffected by the volatile essence. M. Jousset de Belleme has already shown that the essential oil of *Pyrethrum carneum* is without influence on insect life, and the same is also true of the pyrethrum of the Caucasus. We may recall the fact that Hirschsolu has recently come to the same conclusion. Continuing his work, M. Eymard extracted the resinous matter of the powder by means of ether, obtaining 5.6 per cent. of dry product, 3.8 of it being fatty matter and 1.8 resin. An alcoholic solution of the entire residue was placed on paper, the alcohol allowed to evaporate, and some insects placed on the paper. Immediately the insects showed symptoms of much agitation, and within five minutes they died. A solution of the resin alone had exactly the same effect. Alcoholic and aqueous extracts of the powder were also made, but these proved to be innocuous to insects, and M. Eymard concludes that there is no doubt that it is the ether-soluble resin which is the insect-killing constituent, and that the finer the powder is the more active is it. The following is the result of the complete analysis of the powder:—

Essential oil	..	..	..	A trace
Fatty bodies, soluble in ether	..	..	3.8	per cent.
Resin, soluble in ether	..	..	1.8	"
Brown resin, soluble in alcohol	..	..	4.8	"
Vegetable albumen	..	..	1.75	"
Gummy matter	..	..	14.75	"
Inulin and starch	..	..	8.5	"
Mineral salts	..	..	7.88	"
Woody matter	..	..	53.72	"

The ash—7.885 per cent.—consisted of potassium chloride, 1.94; calcium carbonate, 4.15; calcium phosphate, 0.17; silica and iron, 1.625. A mere trace of iron was only found. In a recent investigation Messrs. Schlagdenhaufen and Reeb, ascertained that the active principle of pyrethrum flowers is an acid (pyrethrotoxic acid) soluble in alcohol, amylic alcohol, ether, and chloroform, which may be isolated by means of ether after having been converted into an alkaline salt and decomposed by tartaric acid in aqueous solution. Apparently this is the resin above mentioned.

BARK OF ARTAR ROOT.

THIS bark is obtained from the root of *Xanthoxylon senegalense*, D.C. The root is described by Giacosa and Soave as being generally cylindrical, somewhat contorted, and covered with bark; the underlying wood is pale yellow, with minute white spots; the annual rings are barely visible; the medullary rays are very fine and waving, and meet at the centre, where, however, there is no pith; the wood is very close, tough, hard, and heavy, and has neither taste nor smell. The bark is covered with waving, longitudinal furrows; in colour it is reddish-brown with bright yellow spots, or yellow with greyish patches; it has a peculiar aromatic odour, and a taste which is aromatic at first, then burning, and causes itching of the tongue. The authors have found a fixed oil in the bark, also a neutral, crystalline substance melting at about 120°, and two alkaloids, the more abundant of which is amorphous. To this they have given the name *Artarine*. It exists to the extent of 0.4 per cent., and is an amorphous, uncrystallisable, rose-grey powder which darkens a little on exposure to light; it turns brown on heating to 210°, and melts with decomposition at 240°. It is alkaline, and is converted by acids into golden-yellow salts. The analyses of the compounds of artarine agree equally well with the formulae $C_{21}H_{23}NO_4$ and $C_{20}H_{17}NO_4$ (berberine); points of resemblance and distinction between artarine and berberine are that artarine forms yellow salts, the solubility of which is diminished by acids; it forms a periodide, and the reactions are like those of berberine. But the alkaloid itself is colourless, uncrystallisable, and the physical factors differ from those of berberine. It dissolves in sulphuric acid without colouration, but the addition of potassium nitrate makes the solution blood-red. The second alkaloid crystallises in blood-red needles soluble in water, and forms yellow salts when heated with acids. Besides these alkaloids, the authors have isolated a neutral, crystalline substance which is either identical with cubebin ($C_{10}H_{19}O_3$), or has the formula $C_{11}H_{11}O_4$. This substance crystallises in transparent, colourless prisms which melt at 123°, and dissolve readily in warm ether, chloroform, alcohol, and light petroleum, but are insoluble in water. A neutral nitrogenous substance of unknown composition has also been isolated.

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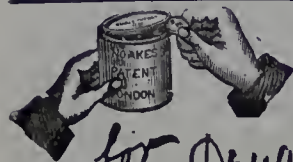
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EDITORIAL NOTES.

THE FORTHCOMING PHARMACY BILL.

IN the case of Glover v. Withers, tried at the Birmingham Assizes, and reported in this journal last week, there was an item of evidence which is worthy of the serious attention of all who desire to see the condition of pharmacy satisfactorily established. In that case it was contended on behalf of the defendant that he could not enter into a partnership which the plaintiff claimed, alleging as one good reason that he (the defendant), being unqualified, could not legally be partner in the ownership of a chemist's business. It then appeared that the solicitors of the litigants had consulted about this difficulty, and had ultimately taken counsel's advice upon it. Counsel had given the very sound opinion that the unqualified man could not legally be a partner in such a business, and had, therefore, recommended the formation of a company.

Of course; why not? An unqualified person wants to carry on a chemist and druggist's business—to call himself a chemist and druggist—to make the public believe he is duly qualified, and to get these advantages without going through the laborious and time-consuming methods of examinations and certificates for service as detailed in our Educational Number. He consults a lawyer or a company-monger, or it may be a chemist's assistant out of a situation. If the lawyer or the other consultee is up to his business, his answer is prompt: "Nothing easier. Give me ten guineas, and a few pounds for fees, and the thing shall be put through

for you in less time than it would take you to read the first chapter of *Cæsar*."

"But," says the astounded shopkeeper, who is so soon to bloom into a chemist and druggist with all his blushing honours thick upon him, "don't I risk getting imprisoned, or fined, or having my stock confiscated? Is there not a Pharmaceutical Society, or something of the kind, which looks after chemists' interests and prosecutes interlopers sometimes?"

"Nary risk," is the jaunty answer. "The law allows it, and the Pharmaceutical Society acquiesces with the most charming amiability."

And soon the fears and scruples of the untrained outsider, or the plucked insider, are set at rest, the ten-pound note changes hands, the "new company" is registered, and the cutting price-lists fly around.

In the case before us it took two solicitors and a barrister to make this discovery. No doubt a great many lawyers have a vague sort of idea about this means of qualification by registration; but with all their familiarity with the mysteries of the law they can, perhaps, hardly realise that such a preposterous absurdity as this has been permitted to continue for years without a protest from pharmaceutical authorities. But the process of education is going on. Those two solicitors and the barrister will know all about the matter henceforth, and so gradually the good news will spread, and the development of company-druggists will go on with accelerated speed, until ultimately, if nothing is done, it will become the usual method of acquiring the title of chemist and druggist.

When the Pharmaceutical Society fought the company case in the law courts up to the House of Lords, it was with the express intention of going to Parliament subsequently if it appeared that the Act was defective in its form of expression. It is difficult to state the fact in a sufficiently respectful manner—that a dozen Pharmaceutical Councils have cogitated this defiance of the spirit of the Act intrusted to their keeping, this serious hindrance to the present progress and danger to the future interests of pharmacy—and that not one of them has had the energy, the pluck—we may say the common sense—to ask the Legislature in a formal manner if it meant in 1868, or means now, that qualification as a chemist and druggist may indeed be obtained by mere registration at Somerset House. Once again a Council is planning some sort of measure for submission to Parliament. We can have, of course, no acquaintance with their deliberations; but we know the deliberators. There is, we believe, among them a small minority who would like to make this question the central feature of a new Pharmacy Bill, and fight it through boldly, letting the company men win, if they can, by fair argument; but they are confronted by a majority which has always refused to take action in this direction, and whose spokesmen have never yet given any substantial reasons for their lethargy. The majority may have become the minority this year, for aught we know; we hope it has. There is any amount of enthusiasm ready for a clear, resolute, reasonable Bill, designed to make of pharmacy such a profession as the founders of the Pharmaceutical Society had in view fifty years ago. To accomplish anything like this, the monstrous abuse we have pointed out in this article must be made impossible, at least in the future; and unless the new Bill shall aim at doing something of the kind we cannot see how its promoters can claim or hope for the support of the united trade.

LEEDS LOOMING.

THE headquarters of the British Pharmaceutical Conference next week will be the Philosophical Hall, Park Row, Leeds.

Here on Monday evening, at eight o'clock, Mr. Charles Umney, the president, will hold a reception, and thereafter will be a *conversazione*, with other schemes of entertainment. This reception and *conversazione* must now be regarded as an established feature of the Conference proceedings; yet four or five years ago there was nothing of the kind to bring the members together preparatory to the heavier work of the meeting. In consequence it often happened that they did not fairly settle to work until the last day, and then the immediate prospect of social and outdoor pleasures favoured a rushing of the technical work of the meeting.

Now, it is well to keep in mind that a comparatively small proportion of the time is devoted to the actual business which brings the members together. Assembling on Tuesday and Wednesday at ten o'clock, the morning sessions last until one o'clock, when an adjournment is made for luncheon, after which about two hours are again devoted to papers. There is little more, therefore, than ten hours during which reports are to be received, a presidential address delivered, about a score of papers read and discussed, and a number of speeches made on votes of thanks. Exemplary promptness is evidently required in every department, especially in attendance at the sessions, and in readiness to discuss any subject worthy of discussion. It has been with the object of assisting in the latter respect that we have for some years past published, prior to the meeting, short notes dealing with the various subjects. These notes, it will be understood, do not pretend to deal with the subjects as the Conference contributors may deal with them; they simply bring together a few of the more important facts previously recorded, thus preparing the way, it is to be hoped, for what is forthcoming. We continue these remarks from last week.

The paper which Mr. E. H. Farr promises on some alkaloidal tinctures is one which may probably be considered with that by Mr. Robert Wright on an allied subject. The tinctures of aconite, belladonna, cinchona, hemlock, gelsemium, henbane, jaborandi, nux vomica, opium, stramonium, and green hellebore are those which may be regarded as alkaloidal, if we except colchicum, whose active principle is doubtful, compound camphor, and the quinine tinctures. Some years ago Mr. Farr worked on cinchona, and was able to say that the tinctures may vary greatly in alkaloidal content; and, in regard to all the other tinctures, something similar has been done by other observers, there being no doubt of the fact that these preparations vary considerably in value. Whether this is owing to imperfection in pharmacopœial processes, or to carelessness on the part of manufacturers, is a question which the Conference could give its judgment upon; and, at the same time, something ought to be said on the possibility of having official alkaloidal standards for the more potent and more variable of these tinctures. Mr. Gerrard's paper on "The Alkaloidal Value of Annual and Biennial Henbanes" is not altogether disassociated from the subject of tinctures. We have arrived at our choice of flowering biennial henbane as the official drug with comparatively little guiding data, except the old rule that a plant is at the maximum of activity when it reaches the flowering stage. But why should biennial henbane be preferred to the annual flowering species? It is true the latter is not *Hyoscyamus niger*, but physically it resembles it greatly, and on that account is used in medicine. Seven years ago Mr. Gerrard said that the only way to decide between the two plants was to determine their alkaloidal values, and now he promises to give such a decision. As a practical cultivator of the drug, he should have some important facts to communicate.

It is a well-known fact that the *strophanthus* seeds of

commerce are not all alike; they differ in size, in colour, and unquestionably in constitution. More than one of these are classed as the seeds of *Strophanthus hispidus*, and as we have on several occasions stated there is a need for a thorough revision of the whole subject by a competent pharmacognocist, we may expect that, in the paper on *Strophanthus hispidus*, by Mr. E. M. Holmes, we shall have any doubtful points cleared up, this writer having given the matter close attention for some years. Another paper announced, which falls in the department of Materia Medica, is on adulterated saffron, which has become somewhat common of late, and about which there is a very succinct article in the "Manual of Pharmaceutical Testing." We presume that Mr. William Kirkby, of Owens College, will bring the microscopy of the subject before the Conference. The paper promised by Messrs. Naylor and Chaplin on the chemistry of the bark of *Oroxylum indicum* is one which may create considerable curiosity, as the drug is almost unknown under the name given. The plant is more familiar under its old name—*Calosanthus indica*; it belongs to the Bignoniaceæ, and the bark is used in India as a discutient application to rheumatic swellings. It appears to be a powerful anodyne and diaphoretic; it is, at the same time, astringent, faintly bitter, and is said to contain some free acid; but upon this and other points we require information such as the authors of the paper will probably give. Still another drug will come under consideration—viz., buchu, upon which Mr. C. J. S. Thompson is to communicate a paper. Mr. Thompson is to speak of the medicinal properties of the three kinds, and we trust he will be able to corroborate what has already been proved—that the medicinal value is in inverse proportion to the commercial value. Thus the leaves of *Barosma betulina* contain almost twice as much essential oil as those of *B. serratifolia*. Yet the price of the latter is generally 50 per cent. higher than that of the former, and the facility for adulteration is greater in the former case. Mr. Siehold promises to speak on the antidotes of strychnine: of this we need only say that the drugs which toxicologists now rely upon are chloral, chloroform, and potassium bromide. Mr. R. H. Davies is down for a paper on a double chloride of caffeine and mercury. Curiously there are mercurial chlorides of most of the alkaloids, but none of caffeine, the only body of this nature being that discovered by Nicholson, and to which the formula $C_8H_{10}N_4O_2 \cdot HgCl_2$ is assigned, so that it is not regarded as a double chloride. Dr. Mootooswany's paper on the medicinal properties of some of the indigenous flowers of India is one upon which it would be vain to speculate, the flowers of India being almost as numerous as the stars in heaven. Five additional papers, making altogether twenty-two, have been promised since last week. One of these, by Mr. Harold Wyatt, junr., is on "Chloroform as a Preservative," so that it will be taken along with Mr. Burnett's. Mr. H. Broadbent will communicate some notes on "Cream of Tartar." In April of this year we printed a note from this writer, in which he showed that Italian cream of tartar (which forms the bulk of our supply) contains from 3.5 to 4.5 per cent. of calcium tartrate, and from 93.5 to 95.5 per cent. of potassium acid tartrate. The Pharmacopœia now allows some calcium tartrate, but it is vague as to how much, and it would be a decided gain if those with experience at the meeting would state if it is desirable to fix a limit for calcium tartrate, and to give a saturation test for the acid tartrate. Mr. Hooper sends "Chemical Notes on Manna," which opportunely follows Mr. J. R. Jackson's exhaustive paper on the botanical and economic side of the subject, which we published on June 28. Practically, the whole of our information on the chemical side is traditionary. Mr. J. C. Umney is also to

contribute a paper on "The Liquid and Solid Extracts of Malt." This will give us a contrast of considerable interest, as lately there has been a tendency to under-rate the value of the solid extract without very substantial data for the statements. Finally, there is to be a paper on "Some Points in the Analysis of Oils," by Messrs. T. Fairley and B. A. Burrell.

It will be gathered from these preliminary notes that the feast provided by the Executive is not an uninviting one, and, in addition thereto, we may recall the fact that the social functions are specially attractive. There is the reception by the Yorkshire College authorities on Tuesday afternoon, a drive to Roundhay Park on Wednesday afternoon, and a smoking-concert at the Queen's Hotel the same evening; while the Thursday excursion to Wharfedale will take the members through some of the most romantic scenery of the North of England. Altogether, the meeting should be attractive and profitable above the average.

CONSULTING CHEMISTS.

THE amiable Lincolnshire doctor who lately described "the so-called consulting chemists" as "a horrible class of impostors," through whose cupidity, partly, poor children got no chance to live, and who "wished to see them all (the consulting chemists) exterminated," may have been very sincere, but his methods of controversy are not calculated to promote the healing of the hereditary feud which has existed for centuries between medical practitioners and pharmaceutical shopkeepers. From the oldest times the drug-shop has always been the place to go to for medical advice. Galen, we believe, kept a drug-shop in Rome, and Paracelsus, though he was too restless to work up a business in any one place, was rather a drug-dealer than a diagnoser. It is the refinements of civilisation which have developed the prescribing physician. When he first got above the shop he had his own particular attendant apothecary. The apothecary, however, kept rising and pushing his superior still higher, simply because of the economic law which compelled people who wanted medical advice to go to "the shop." The apothecary in his turn began to neglect the shop, but the populus would have it, and so chemists and druggists were necessitated. Acts of Parliament are poor things in opposition to natural laws, and it is now three-quarters of a century since a British Parliament has tried by such means to repress the irresistible tendency of mankind. It is quite obvious that the drug-shop keeper and the diagnoser must always be allies in the art of healing. After a good dinner they sometimes describe themselves as such; but Dr. Tuxford perhaps more accurately expresses the true inwardness of "Philip sober." If our theory is sound, however, he may as well abandon the hope of exterminating his cupiditic foes. The task is impossible. We do not object to him and his class; we do not describe them as horrible impostors; in fact, we rather like them. But we must ask them to understand that, according to the proofs adduced above, it is they, not we, who are the interlopers. All we ask for is a little reasonable modesty.

That friction and irritation must continue to result between those whose interests overlap we must expect. The best lubricant is prosperity. We are familiar with the reformers on both sides, and with many who look on from the lofty height of baronetcy, and who suggest, as if they had made a discovery, that the medical men should limit their activities to prescribing, and the pharmaceutical men to dispensing. Some day, it may be, some monstrous crimes or blunders will come to light, and the Legislature will rush to the Continental law, which forbids the man who prescribes

to dispense his own medicines. But until then it is a question of mutual interest. We know the theory, and fully agree with it, that the suggested division of labour would be better for the doctor, better for the chemist, and better, especially, for the public. Undoubtedly true; but when we are asked further to agree that, while the doctor and the chemist would both flourish under this system, the public would be no worse off financially, our arithmetical imagination totters.

But we believe, with the patent-medicine man, that there is nothing the wealthy public is so ready to spend its money upon as on its physic. It demands, however, to be pampered by having its medicine made attractive. It likes to be dosed with the newest discoveries in therapeutics. There are a hundred thousand ladies and gentlemen in London alone who can be made happier by something new in the medicine line. The rising generation of medical men are getting to understand this *fin de siècle* passion; the pharmacists seem slower to appreciate it. A minority of them only seem to grasp the trade importance of keeping abreast with the front rank in regard to new medicines, new appliances, and new processes. The rising physician and the inquisitive layman soon finds out the pharmacist who can cater for him in this respect, and that reputation is more profitable than even a local fame among mothers and nurses.

There is one respect in which chemists should be better equipped than many of them are. In France, though counter prescribing is expressly forbidden, the victim of any accident is always taken first to the nearest pharmacy. Every chemist ought to be more skilled than his neighbours generally in the treatment of wounds, burns, and other physical injuries. Opportunities are often available for acquiring such skill, and young pharmacists should take every possible advantage of them. In the first Pharmacy Bill, which Jacob Bell introduced in the House of Commons, it was provided that toxicology should form one of the subjects of examination. There is nothing so essential in the whole range of a pharmacist's studies as an acquaintance with the proper antidotes to apply in cases of poisoning. More likely than not, when such cases occur, the first doctor applied to will not be at home; the chemist's shop is always open, and there ought to be always some one competent in charge. Mr. Bell had to withdraw that subject of toxicology from his scheme of examination to buy off the opposition of the apothecaries, who saw in it an insidious attempt to introduce into the pharmaceutical training some lessons on medical treatment. It is a pity that Mr. Bell did not deal with the apothecaries' demand by fully exposing their cruel and selfish policy in Parliament and challenging their opposition. A proposal to add toxicology to any pharmaceutical curriculum would meet with a good deal of sympathy now, and nothing better could be desired than that some medical body should oppose it.

COMMENTARY.

SELLING LAUDANUM UNDER A PATENT-MEDICINE STAMP.—We called attention last week to the evidence of a shopkeeper, not a registered chemist, given at an inquest in Lancashire, who, it appeared, was selling laudanum, or something very like it, under the title of "Narcotic Mixture," labelled "Poison," and bearing the medicine stamp. "In this district," writes a correspondent from the same county, "you can obtain it from nearly every country shopkeeper. It is

generally called 'Opiate Tincture,' or else 'Anodyne Elixir.'" It is an absurd thing that the Pharmacy Act should be allowed to remain on the statute-book and that this state of things should continue unchallenged. As we pointed out last week, the responsibility rests with the Pharmaceutical Council exclusively, for so long as the bottles are properly labelled they only can prosecute.

SQUEEZING THE SANDWICH-MEN.—According to the *Times* the sandwich-men, or some people acting for them, are forming a trade-union. It is said that advertisers are charged at the rate of 2s. 6d. per day for every pair of boards sent out, and that the contractor pays the men only from 1s. 2d. to 1s. 6d. The union aims at abolishing the middleman, and dealing direct with the advertiser.

REGISTERING A COLONIAL MEDICAL DEGREE.—The Medical Council have accepted for registration under the Medical Act of 1886 the Melbourne diploma of Professor H. B. Allen. Under the Act named certain foreign and colonial diplomas were declared to entitle their holders to practise in the United Kingdom. Some time later the Privy Council was asked to apply the Act to Australian diplomas, but it declined on the ground that British diplomas were not recognised at the Antipodes. Last year the Victorian Parliament passed an Act removing this objection, and permitting doctors holding proper European diplomas to practise in the colony. The Privy Council therefore admitted Victorian doctors to the privileges of the Act, and Professor Allen is the first to claim registration.

A LECTURE ON ADVERTISING.—Mr. Julius Böhm, Secretary of the Imperial Commercial Museum of Vienna, writes to tell us that he is to give a lecture at that institution in the course of the coming autumn to the commercial world of Vienna on advertising. Mr. Böhm has seen our Summer Number, and he intends to use that in illustration of some of his remarks. At about the same time he will arrange in the Commercial Museum an exhibition of advertising matter (newspapers, street-posters, show-cards, labels, pictures, hand-bills, counter-bills, glass labels, &c.), and this exhibition will remain open for a fortnight. He asks us to invite chemists and druggists, and printers of show-cards, to send him specimens of their advertising productions for this exhibition. They will get fifteen days' prominent advertisement in the city of Vienna for no charge beyond the mere cost of posting their announcements to Mr. Böhm, at the "K. K. Oesterreichisches Handels-Museum, Vienna."

A NEW DISTILLING APPARATUS for the use of steamships has been invented by an American named Yaryan, and is called by his name. It has been practically tested on two voyages between Rouen and New Orleans on the *Prudence*, of Cardiff, a steamer of 2,319 tons. A great difficulty on steamers is to keep the boilers clean. Fresh water is an absolute necessity; the use of salt water for a few hours would cripple most modern boilers for life. Of course, ships start on a voyage with their boilers full of fresh water, which, after doing duty as steam in the engine, is condensed and returned to the boiler again. There is, however, always considerable waste that has to be made up from somewhere. Various kinds of apparatus for converting sea water into fresh by distillation have consequently been employed, but all have been more or less unsatisfactory in the working. They all suffer from the defect that whilst by the use of fresh water the deposit of scale in the boiler is prevented, the distillers themselves rapidly become scaled up, their evaporative power becomes seriously diminished, their tubes leak, and, the water produced being no longer perfectly

fresh, they require constant care and frequent cleaning, so that, in fact, the trouble is only removed from the boilers to the distilling apparatus. The feature that distinguishes the "Yaryan" apparatus from those hitherto in use is that, while in the latter the sea water to be distilled is invariably at rest, in the "Yaryan" it is in a state of rapid motion. It is claimed that, owing to the feed being introduced in the form of a thin cloud of spray, the evaporation in the "Yaryan" is much more quickly effected, and the relative evaporative power of each pound of steam used is far higher than in other machines. For the same output of distilled water the dimensions and weight of the "Yaryan" are much below those of previous evaporators. A "Yaryan," for instance, capable of delivering fifty tons of distilled water per day is a cylinder only 7 feet long and 3½ feet in diameter.

SUPPORT HOME SCIENCE.—With a chemist as president, Section B may expect to be a popular one next week at Leeds. Professor Thorpe, who is the president of that section, promises to cheer the hearts of the majority of his audience by defending the claims of Priestley and Cavendish to the great discoveries of oxygen, hydrogen, and the composition of water, against the rival assumptions which M. Berthelot, perpetual secretary of the French Academy of Sciences, has lately put forward on behalf of Lavoisier. In a work entitled "La Révolution Chimique," M. Berthelot, while admitting that Priestley was the first to consciously isolate oxygen, seeks to show that Lavoisier was justified in claiming, as he did, a participation in the discovery. Professor Thorpe intends to prove that Lavoisier knew nothing of oxygen until Priestley himself told him of its existence. Priestley was born some six miles from Leeds, where he was a Unitarian minister. M. Berthelot does his hero-worshipping thoroughly, for he further claims that Lavoisier was the first to discover the non-elementary nature of water, and combats the generally-accepted claims of Cavendish in this respect. Professor Thorpe may be expected to demolish pretty completely the somewhat flimsy reasons for attributing all the glory to the great French chemist, but it will be a mistake not less misleading to deny to Lavoisier's memory the great honour due to his genius, of appreciating clearly the character and consequences of the experiments of his contemporaries.

THE VACCINATION CONTROVERSY.—An Oxford graduate has contributed a striking article to the *Pall Mall Gazette*, narrating how he became an anti-vaccinationist, and the result. His first child, he says, "was duly vaccinated, as the law (with offensive imperiousness) directs, within three months of its birth." The wound became a serious one, and therefore satisfactory and efficacious, as he and his wife were given to understand. A few days later, however, the child died. The doctor said it was "an unaccountable collapse," and certified "convulsions" as the cause. A second child was vaccinated, and it also suffered severely, but recovered. The graduate then investigated matters, and became convinced that the death of his first child was due to the vaccination. The doctor admitted that "quite possibly" the convulsions might have been caused by the vaccination. He refused to have his third child vaccinated, and was consequently summoned to the Town Hall at Brentford. He describes humorously his trial; but when he quoted to the Bench the Registrar-General's returns, showing that since 1881 an average of rather more than fifty children die annually in England and Wales from "cow-pox, or other effects of vaccination," he was rather amazed at the chairman's contemptuous inquiry, "Is that all?" He claimed that his conviction that he had lost a child through vaccination was "a reasonable excuse" under the Act for neglecting

vaccination in the case of other children; but this argument was brushed aside by the Chairman replying, "We don't admit it," and fining him ten shillings. The graduate believes that the compulsory law will certainly be repealed within three years; and he argues that the law cannot fairly enforce it on the assumption that by neglecting it you may injure your neighbour: for if he and his children are vaccinated, he should be secure against catching the small-pox from you; and if he is not secure, then the case for compulsion falls to the ground.

IMPENDING REVOLUTION IN THE CITRONELLA INDUSTRY.—The citronella and lemon-grass plants which cover large expanses of the upland prairies of Ceylon, have long been used for essential-oil distilling purposes; but it has hitherto been an unsolved problem for the distillers what to do with the bulky plants after distillation. At present they are simply a nuisance as refuse, and the fresh grass is frequently burnt down over large tracts of country to obtain a cheap cattle-food from the young shoots which rise from beneath the ashes. It is now believed, says the *Ceylon Observer*, that the grass may be made useful, after oil-pressing, for the manufacture of light and cheap tea-chests, for which there is a practically unlimited demand in the island. The tea-chests now in use are obtained from England, at a cost of carriage on each box from London to Ceylon of 6d. On this item, therefore, a very considerable saving will be effected if the chests can be locally produced. But it is confidently anticipated, that besides that economy, a further one of very considerable amount will attend the local production of the strawboard, which has hitherto been obtained from Holland. The change contemplated will, therefore, render it possible to supply chests made from citronella grass at a cost considerably below that of the wooden boxes at present used. Experiments made up to the present afford every prospect that the new industry will be successful. The first works are to be started near Galle, and will commence to use up the waste material from the oil-mills. The prospective creation of this industry in Ceylon deserves additional attention from a pharmaceutical point of view, as it may tend to increase very largely the already excessive production of citronella and lemon-grass oils, because these articles will practically become by-products of the tea-chest industry.

SHOP-HOURS AND HALF-HOLIDAYS.

WE are advised of the closing arrangements at the following places:—

—				Half-holiday	Satur- days	Other days
Bradford	..	..	..	—	P.M.	P.M.
Burslem	..	..	..	Thursdays .. from 2	—	7 to 8
Clippenham (Wilts)	..	..	..	Wednesdays .. 4	10	8
Horncastle	..	..	..	—	9.30	7
Spilsby	..	..	..	Tuesdays .. 3	—	8

OLEUM CHÆNOCETI, an oil obtained from one of the whale tribe—*Balæna rostrata*—is stated by Dr. Gustav Guldberg to have a specific gravity lower than that of any other animal oil, and it possesses marked penetrative properties. A mixture of equal parts of the oil with chloroform penetrates the skin rapidly, and acts upon the nerve terminations very efficiently, thus offering a good application in all forms of pruritus, neuralgia, &c. The oil is 40 per cent. cheaper than olive oil, and at present is only procurable in Christiania. The crude oil should not be employed, as its smell is abominable.

FLEXIBLE GELATINE CAPSULES.

BY JOHN A. FORRET.

ALTHOUGH within the last few years gelatine capsules have come to be used more generally for the administration of nauseous medicines, it cannot be said that chemists and druggists are, as a rule, well acquainted with the manner in which they are manufactured. To a large extent, therefore, capsule-making is still a speciality, and the inconvenience which thereby arises is often acutely felt. This is the case especially when we have to send to manufacturers for a few out-of-the-way capsules which may happen to be ordered by prescription. My experience goes to show that there is little reason why every chemist and druggist should not as readily make a dozen capsules as a dozen pills, and with the simple apparatus described below he may not only do this, but keep a small stock of the capsules in common use, while he has the satisfaction of sending out an article of his own manufacture.

As the result of many experiments, I found the following formula to yield the most satisfactory mass for flexible capsules:—

Gelatine (in thin sheets)	16 oz.
Water	20 "
Glycerine	12 fl. oz.
Simple syrup	8 "

Mix the water, glycerine, and syrup, and soak the gelatine in the mixture; when uniformly soft, melt in a water-bath.

Capsules made from this mass and exposed to the air, lose weight to the extent of from 16 to 22 per cent., according to the condition of the atmosphere; and if subjected to a very dry air will lose a still higher percentage, but will re-absorb moisture when placed under ordinary atmospheric conditions. This is an important factor, for, if the artificially-dried capsule be closed, it will soon show signs of pitting; whereas one newly made, or one which has been kept in a well-closed box, will become a firmer and more elegant capsule a day or two after being closed. Capsules made from a mass containing too much water will, on drying, have their capacity materially diminished, and if filled in the fresh condition become very firm, and put an unnecessarily severe strain upon the joint round the neck of the capsule.

It will be apparent, then, that the most suitable mass is one which loses about 20 per cent. on being exposed to the air; and that capsules not required for immediate filling must be stored in a well-closed box.

We now require a water-bath to heat the mass, and keep it at a stated temperature while in use. Fig. 1 shows the parts of such an arrangement; A is a round tin 6 in. wide by 6½ in. deep; B, an earthenware jar, 5 in. wide by 5½ in. deep, which is suspended in A by a ring of plaster of Paris cast round the neck, the groove in the jar affording a sufficient grip. Through this ring there is a hole bored for a thermometer, which is suspended by an indiarubber band to prevent the bulb coming to grief on the bottom of the tin; and if a thermostat is used, it may be let through a second hole drilled in the plaster of Paris, and suspended in the same way.

The most convenient sizes of capsules are 5, 10, 15, 30, and 60 minims, and moulds are required capable of producing capsules containing these quantities when barely full—a full capsule being very difficult to close. The most elegant shape is flattish-oval, and the moulds should be cast with necks not less than an inch long, and sufficiently thick to permit of the easy withdrawal of the capsule. The moulds I have in use, and which serve the purpose perfectly, are cast in block tin. I tried the brass moulder for one size—a 10-minim mould—but in spite of the full instructions he got, together with a pattern, what he sent me were assorted both in shapes and sizes. The advantage of block

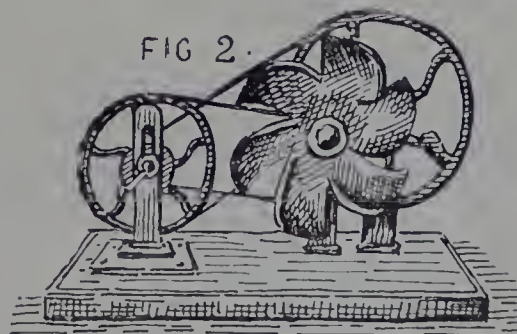
tin is that one can cast one's own moulds; the metal being soft, the casting is easily dressed by first scraping with a knife and finishing with fine emery cloth. Of course such work will not compare with the highly-burnished article of the brass-finisher, but will answer the purpose quite as well.

The moulds are soldered to a circular metal plate, to the back of which is fixed a handle four or five inches long (fig. 1, c); as the diameter of the plate carrying the moulds is 3½ inches, and that of the jar containing the mass 5 inches, there is ample room for "dipping" without bringing the moulds into contact with the jar.

In making the capsules, about half-fill the tin with water, place inside of it the jar containing a quantity of the mass, and apply heat until the temperature of the water rises to about 170° F. When the temperature has fallen to about 130° F., the mass will be melted all through, and its surface covered with air-bells, which must be carefully skimmed off. The moulds are now rubbed over with a piece of oiled rag, dipped into the mass about half an inch up their necks, slowly withdrawn, and rotated till the gelatine sets. In five or six minutes the capsules are firm enough to be drawn off the moulds, which is easily done by using the finger and thumb for those of the 15 minims and under, and three fingers for the larger sizes.

It is essential to keep a lid on the jar between the "dips" to prevent the formation of a film on the surface of the mass; and the water which condenses on the lid must not be allowed to drop back into the mass, or the capsules will be one-sided or otherwise deformed. When the temperature falls to 125° F. the bunsen is lighted and the temperature raised to 135° F., this variation not materially affecting the consistency of the mass. Obviously a mass which has been in use for some time will become a little firmer, and require a higher temperature to produce capsules of the proper thickness. When a thermostat is used it may be set for 130° F.

Fig. 2 shows a chain of multiplying wheels, the largest



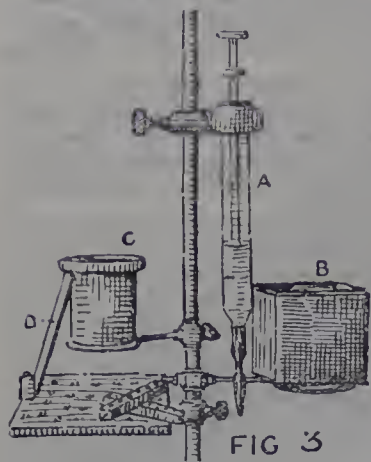
wheel carrying a handle, and the smallest a piece of stout tinfoil cut and bent in the form of an air-fan. This machine is an efficient piece of apparatus for rapidly cooling the capsules. When the moulds are drawn from the capsule mass and slowly turned in front of the rapidly revolving fan, a very few seconds suffice for the setting of the gelatine; whereas if allowed to cool spontaneously, between one and two minutes must elapse before each lot can be set aside.

The capsules have now their necks, or, as they are sometimes called, their tails, cut off with a pair of scissors, and are then ready for filling.

Capsules may be readily filled with any liquid by means of an ordinary male glass syringe; a suitable pipette is attached to the nozzle with indiarubber tubing, and the syringe, filled with the necessary fluid, is mounted in the clamp of a retort-stand, as shown at A in fig. 3. The operator being seated, and the clamp fixed at a convenient height, the empty capsules are held in turn beneath the pipette with one hand, while the piston-rod is manipulated with the other. Complete control of the flow is secured by retaining a little air between the piston and the contents of the syringe, the compression of the air effecting a steady flow from the pipette, which may be instantly stopped by raising the piston. Should the piston not fit accurately, this air-chamber has the further advantage of preventing any of the fluid getting past the piston, any air which escapes being replaced by an occasional hubble or two drawn through the pipette. As the capsules are filled they are set

aside in a vertical position in pill-boxes of a suitable size. It is important, especially when filling oil, to keep the lip of the capsule dry, an "oily-mouthed" capsule being difficult to close securely.

Powders can be enclosed in capsules in much the same way as that described for liquids, a small glass funnel taking the place of the syringe. When, however, the powder is bulky and requires packing, the process is both tedious and clumsy, and the resulting capsule more or less hard compared with, say, a castor-oil capsule; moreover, the time required for fill-



ing such capsules renders it impossible to turn them out at a moderate price. The most expeditious way of capsuling powders is to reduce the powder to the consistence of a thin paste with some inert fluid excipient, and fill by means of a syringe.

For closing the capsules a small water-bath, such as is shown in fig. 3, is required; it is similar to the bath used for heating the capsule mass, B being the tin, and C the pot containing the mass. The skimming from the mass, the necks of the capsules, damaged capsules, &c., may be remelted and used for closing and finishing the capsules. The capsule is closed by gently drawing across its mouth a rather large camel-hair pencil charged with the melted mass; if the mass be too hot, the film left by one sweep of the brush will probably be too thin, in which case a second application of the brush is necessary.

The finishing touch is now given to the capsules by dipping them, mouth downwards, into a mass made by adding to the ordinary mass about a fifth part of water, and using it at a temperature just sufficient to keep it fluid. A small ladle (fig. 3, D)—made by tying the bottom of a test-tube to a small wooden handle—is used to lift the mass, and the capsule is dipped into the ladle—about one-fourth of the capsule being immersed—and then set into one of the holes in the tray shown at the bottom of fig. 3. This tray, which may be conveniently made by filling the lid of a tin box with plaster of Paris, and boring holes of a suitable size in the plaster when it has set, is suitable for capsules of 15 minims and upwards, but for the 5 and 10 minim sizes narrow plaster supports are necessary (see fig. 3), so as to allow the edges of the fingers to pass below the surface of the plaster in depositing the finished capsule in one of the holes.

The effect of this final "dipping" is to cover the end of the capsule with a cap of soft gelatine, which, on drying, securely closes the capsule, and gives a neat and elegant appearance to the finished article.

As already pointed out, absorption of moisture from the atmosphere may account for collapsing or pitting of capsules, and is the only possible cause of pitting in the case of capsules filled with powders, oils, balsam, &c. The pitting usually met with, however, is attributable to the absorption of a portion of the contents of the capsule. This absorption has a two-fold action—namely, the passing of more or less of the contents into the substance of the capsule, and the enlargement of the capsule itself, consequent upon such absorption. When the absorbable material is volatile, the capsule, by exposure to the air, ultimately regains its normal size, and the amount of "pit" is proportional to the quantity of material absorbed; but with non-volatile material—e.g., glycerine—the amount of "pit" is equal to the amount of material absorbed, plus that due to the permanently-enlarged containing envelope.

THE AMERICAN CHEMICAL SOCIETY was instituted sixteen years ago, but has never become a really national institution, most of its support coming from New York.

SEQUELÆ.

(AFTER DUNALBA), AUGUST 23, 1890.

"Dunalba's" lines, with humorous grace,
Depict the aspirant's happy face.
Alas! there's trouble still ahead
After examiners have said—
"You're qualified."

The autumn leaves were falling fast,
And Sam had got a shop at last,
Where he dear Laura could invite,
And on the "fascia" board could write—
"I'm qualified!"

And when the winter snow came down,
He brought his Laura up to town,
To share for good and all the joys
Which as a chemist man enjoys
When qualified.

A happy twelvemonth passed away:
He found his business fairly pay,
And said, "A lucky man am I,
Who at the Square had pluck to try,
And qualified!"

But one day, just across the street,
He heard a rush of trampling feet,
And saw a grocer's shop perverted
Into a physic-store converted—
Not qualified!

The grocer, envious of Sam's fame,
In "Limited" had sunk his name,
With tinker, tailor, sweep, and porter,
A carpenter, and letter-sorter—
Not qualified.

And these a "company" had formed
To deal in drugs at rates transformed,
And hired a man for poison-selling,
Who on the premises was dwelling,
And qualified!

Sam laughed at first, and so did Laura,
The apprentice, Tom, and servant, Sarah,
But people *would* have pills and potions
At cutting prices—also lotions—
Unqualified!

Then Sam looked grave, he lowered his prices,
Then tried tin-pots, teas, wines, and spices;
Got into debt, then took to drink,
Lost self-respect, began to sink—
Tho' qualified!

Then came a crash—poor Sam, sold up,
Began to taste life's bitterest cup.
The kindly grocer brought relief,
Gave him a berth to soothe his grief,
Being qualified!

"You see, my boy," the grocer said,
"For your experience you have paid,
The people like their physic cheap,
But do not seem to care a heap
Who's qualified!"

"For butter, bacon, tea, and cheese,
If good, they'll pay what price you please;
But physic's nasty at the best,
And price for that's their only test:
Unqualified!"

"If that's what comes of legislation,"
Said Sam, "alas, for this poor nation!
'Twere better all should have free play
Than that the law should make us pay
As qualified!"

BRITISH AND FOREIGN CONSULS' REPORTS.

EGYPT.

Trade of 1889. Writing of last year's trade of Alexandria, the British Consul calls special attention to the British exports and imports being so much larger in excess of other countries; thus, out of a total of 12,238,982*l.* exports (which, by the way, is a million and a half over 1888) Great Britain figures to the extent of 7,938,162*l.*, which is an increase almost equal to that shown in the aggregate. Austria comes next with 1,011,356*l.*, or nearly half a million of an increase. Imports come up to 7,124,240*l.*, as compared with 7,880,029*l.* in 1888, and Great Britain is at the top with 2,621,005*l.*, a decrease of over 300,000*l.* The notable feature is the daily increasing trade with Austria, both in imports and exports, which is no doubt due in a large measure to the activity and enterprise displayed by Austrian firms, who lose no opportunity of pushing their business.

A Business Hint. British goods show no tendency to decrease, their reputation for solidity being well established; but a little more energy on the part of British merchants and an endeavour to see for themselves the requirements of the country might result in the extension of certain branches of British trade. It would also be an advantage if British firms appointed agents in Alexandria; but few, in comparison with those of other nationalities, are represented there.

Drugs, &c., Imported. The following gives an idea of the business which is done with Egypt through Alexandria in a few of the staples of our trades:—

Articles	1889		1888	
	Quantity	Value	Quantity	Value
		£		£
Olive oil	—	105,830	—	83,890
Perfumery and chemical products ..	—	98,082	—	89,722
Soap lbs.	7,320,992	70,318	6,817,729	72,179
Colours and dyes other than indigo ..	—	61,102	—	43,396
Spices	—	56,483	—	44,392

Gum Arabic. The exports of this once-important article are now almost *nil*, having steadily declined since 1884, when the total exports amounted to 131,000*l.* Large quantities of gum arabic, ivory, and other valuable products are rotting away in the Soudan, where there is no possibility of exporting or properly storing them.

Petroleum. There was a considerable increase in the imports of petroleum, the total value amounting to 181,291*l.*, against 118,236*l.* in 1888. The market was, however, overstocked. The use of petroleum has gradually spread throughout Egypt, and has recently been adopted by the Arabs as far south as Wady Halfa, where it was previously almost unknown. Russian oil, on account of its cheapness, has now almost driven American oil out of the market, and, owing to the higher price of the latter, there are instances of the sale of Russian oil as American, the trade-marks being imitated.

Cotton-seed. After noting the decline in the price of this article from 7*l.* 10*s.* to 5*l.* 10*s.* after the brisk summer trade of 1889, the Consul states that merchants with large capital are holding back the seed until prices improve. England takes about 90 per cent. of the exports of cotton-seed, and Marseilles comes next. In consequence of the failure of the *colza* crop in France a cargo was sent in November to Havre, but apparently the experiment was unsatisfactory, as, in spite of many offers, no more was taken. A new variety of cotton plant, known as *Mitafifeé*, is being extensively cultivated, which produces a much larger proportion of cotton to seed than any other variety.

GERMANY.

Chemicals and Pharmaceuticals. Our consul at Frankfort-on-Main reports that business in chemicals showed a decided improvement in the latter half of 1889. The chemical industry was but little affected by foreign competition, and, according to the report of the Chamber of Commerce, some German chemicals have even got the start of English makers, although certain English chemicals still rule the market, and will maintain their position for a long time yet. The trade in pharmaceutical preparations was very satisfactory in the last quarter of the year, the demand having increased, and the profit was fair. In quinine most sales were made by agents, who successfully competed with the manufactories. During the influenza epidemic this article and similar preparations, such as antipyrin, phenacetine, antifebrin, &c., were consumed to such an enormous extent that the manufacturers and dealers were unable to satisfy the demands. The consul trips when he informs us: "The utilisation of cocoa beans for the manufacture of cocaine has considerably decreased in Europe, as it pays better, it appears, to manufacture the raw cocaine in the countries where the plant is cultivated."

Cocoa butter. The manufacture of cocoa-butter at Mannheim was less remunerative in 1889 than usual, owing to a deficiency of raw material; nevertheless, the industry may be said to be prospering, having reached a production of 6,000 lbs. a day. A licence for this manufacture is said to have been granted to a Dutch company for Holland and Great Britain and dependencies. [We have not heard of that at this side.—ED. C. & D.]

ITALY.

Lemon-juice. The Palermo trade in lemon juice has increased by 5,312*l.*, there having been an augmented demand from France and Great Britain, the two principal markets for this product. France took 4,800*l.*, against 1,186*l.* in 1888. Great Britain raised her demand of 2,115*l.* in 1888, to 3,212*l.* in 1889.

Sulphur. The consul at Catania reports that the exportation of sulphur underwent a decrease of 9,133 tons as compared with 1888, but the demand became active about the latter part of December for shipment in January and February of the present year. Prices are improving. Sulphur is looked upon as the most important and conspicuous of Sicilian products, and forms the essential resource of the island, being exported to all parts of the world. A new system of fusing, requiring no heavy expenses of plant and no skilled assistance, has lately been introduced by Señor Lion Gil y Ruiz, engineer of the Royal Corps of Engineers in Spain, who first introduced it three years ago in the mines of Buen Viento Corre, belonging to a company in Almeria (Spain), where, after several trials, it obtained a brilliant success. Señor Gil went to Sicily last autumn, seeking a larger field of operation for his invention, and, at his own expense, he planted one of his furnaces on the Mugha mine, where several experiments took place, resulting in a saving of 29 per cent. of sulphur as compared with the old mode of fusing through the *Calehrone*. Referring to "an idea which has found its way that Sicilian sulphur is, sooner or later, doomed to be excluded from foreign markets," owing to the recovery of sulphur by the "Chance Process,"

No "Chance." the consul states that Sicilian sulphur, as regards quantities exported, has not suffered from it, and he adds that "Professor Travaglia, of the mining school of Caltanissetta, a gentleman more than competent in the matter, attaches no importance to the Chance process for obtaining sulphur, and is confident that Sicilian production will still have its markets." Professor Travaglia might change his opinion if he took a summer holiday round about our alkali works in England.

JAPAN.

Trade-marks. Referring to the match trade, our Consul at Hiogo states that some native makers supplement the advantage given to them by cheaper production by imitation of the well-known brands of European manufacturers in a manner which would mislead Chineso and other Oriental consumers, though it would

be easily detected by Europeans. No law exists in Japan by which foreigners can obtain protection of their trade-marks, and it is at present open to any Japanese manufacturer, whether of matches or other industrial product, not only to adopt and use a well-known European trade-mark, but to register this in Japan as his own, and thus reap every advantage which it may give him both in Japan and in China.

Camphor. A great impetus was given to the export of camphor by the increase of prices in Europe at the close of the year. Fears were entertained some time ago that the supply was being exhausted; but even if this be the case in some districts—and that it is perhaps so is shown by the fact that the export is being diverted from Nagasaki to Hiogo—new forests of camphor trees appear to become available in others to an extent which prevents any diminution in the aggregate export. The total amount exported from Hiogo in 1889 was 2,426 tons, valued at 182,346*l.*, as compared with 1,795 tons, valued at 117,550*l.*, exported in 1888.

PORTUGUESE COLONIES.

Opium in Mozambique. Some years ago announcement was made in this journal that the cultivation of opium had been commenced in the Portuguese colony of Mozambique, in South-Eastern Africa, and some Mozambique opium actually found its way to the London market. But the cultivation of the poppy, inaugurated by the Mozambique Produce Company, and which promised so well at first, has now ended in a complete failure, and the company has been voluntarily liquidated. The attempt to employ Indian labour cost much money and produced no good results, either because the men were not accustomed to poppy cultivation or were unable to stand the climate. The opium as taken from the fields appears to have been remarkably damp, and by the arrival of the proper time for shipment had shrunk so much that the crop, which had cost the company close on 10,000*l.*, had dwindled down to four boxes, each worth about 100*l.* It is evident that opium can be grown in Mozambique, and possibly with more careful and economic management it might be made to pay.

Strophanthus. A small quantity of this valuable seed has been exported by the English colony at Nyasa late in 1889. The seed is found in many places in the lower part of the Nyasa country, but no attempt has hitherto been made to export it, except the tentative one above stated.

SANDWICH ISLANDS.

Cinchona. Experimental planting of cinchona has lately attracted some attention in Hawaii, but as a number of years are required for the growth of plants to maturity, the result cannot yet be stated.

TURKEY.

Smyrna Trade. Consul-General Holmwood, in his report for 1889, gives an interesting table showing the exports in that year, and how they are distributed. England, of course, takes the largest share of these exports, Austria comes next, then America, and, curiously enough, Holland is fourth, owing to the fact that she buys half as much sultana-raisins as England does. Germany figures in the drug list for comparatively few articles. France takes nearly all the aniseed (1,100 bags), only 40 going to England and 113 to Holland. Of the 115,000*l.* worth of sponges, England takes nearly three-quarters and Austria one-quarter—comparatively little going to other countries. France takes 58 cases of mastic, England 18, and Austria 4; that being all that went through Smyrna last year. It is these three countries, we may say, which take the lion's share of most of the drug exports, but not of the opium, for here the order of the values is—America, 84,640*l.*; England, 43,840*l.*; Holland, 36,160*l.*; Austria, 8,720*l.*; Spain, 5,920*l.*; France, 2,160*l.*; Italy, 1,920*l.*; Germany, 1,520*l.*; and Egypt, 880*l.* Practically, the whole of the liquorice-root goes to America—viz., 88,703 hales; but the galls are fairly distributed amongst all the consuming countries. Of the scammony, America took one case, Italy two, France five, and England 56. Oil-seeds show a curious distribution, thus—France takes the bulk of the poppy-seed; England, 379 out of 460 hags of linseed; Italy takes more

sesami-seed than France—viz., 16,473 as compared with 11,192 hags. Here England is a blank. The following shows where the 23,052*l.* worth of drugs comes from:—England, 6,324*l.*; France, 4,944*l.*; Italy, 4,008*l.*; Austria, 3,240*l.*; Egypt, 1,464*l.*; Belgium, 1,128*l.*; Germany, 864*l.*; Holland, 684*l.*; and Turkey in Europe, 393*l.* These figures do not include some chemicals and spices.

Short v. Long Credit. The consul-general would by no means recommend British shippers to give the long credits which local traders are now in the habit of demanding. Only in very exceptional cases is such credit safe; and the abuse of the system which at present exists is causing an amount of speculative, and even dishonest, trading which will assuredly ere long result in heavy loss to the numerous foreign manufacturers whose agents have been prodigal of their principals' credit for the mere sake of doing business.

Sponges. The sponge trade, by far the most important branch of commerce carried on in the islands near Rhodes, has been declining for some years past. In 1888 the quantity of sponges obtained was about the same as that obtained in the previous year, but there was a marked deterioration in the quality, and the prices were 20 per cent. lower than those of the previous season. 166,666*l.* would represent the value of the sponge trade of all the sporades for the past season. The reasons assigned for the decline in this trade are:—(1) The competition of the American sponges. (2) The thoroughly faulty system that obtains with regard to the hiring of the divers and crews by the boatowners, who, being compelled to pay large sums in advance to the divers before the boats start, are generally obliged to borrow money at 16 per cent., 20 per cent., and even 24 per cent. interest, and thus encumber themselves with heavy debts amounting to at least 1,000*l.* for each boat before a penny has been earned. Moreover, the sailors demand the advance money—in short, every one employed seems to squeeze the penniless sponge to the last drop, and it is dry indeed before the boatowner gets it for himself. (3) The introduction of the diving apparatus, though at first it gave a great stimulus to the trade by enabling divers to obtain a greater quantity of sponges, has had an unfavourable effect by exhausting the supply of sponges in the shallower waters, and thus necessitating resource to the deeper waters, where the risks are increased. The divers are now obliged to descend from 25 to 32 fathoms, although 20 fathoms is the maximum limit for safety. Protective regulations might counteract this evil. (4) The appearance of a submarine plant of rapid growth, which covers the sponges, and causes them to rot, seemed likely to prove the most serious evil, had it not diminished in extent; recently some specimens of this plant have been sent to be examined by scientific authorities in Europe, and it is hoped that a means will be suggested by which the evil may be wholly removed.

Soap. Soap is imported into Smyrna from Crete, Mitylene, and Jaffa. Last year a soap-factory was established, but owing to the dark colour of the native oil the soap is of an inferior quality.

TURKEY IN EUROPE.

Anise. Anise is grown in the Gallipoli region of the province of Adrianople, and serves in the making of the native brandy called "mastic." It is exported to France for mixing with various liqueurs, notably "anissette." On account of the increasing demand the cultivation of this plant is developing.

UNITED STATES.

Boston Industries. The value of paints, oils, and chemicals manufactured in the consular district of Boston last year was 1,263,108*l.*, and of "food preparations" 17,253,461*l.*

Turpentine. The exports of turpentine from Charleston in 1888 were 41,776 casks, and in 1889 42,558 casks. Casks of turpentine average 51 gallons English measure, and the average weight of a barrel of rosin is 415 lbs. English weight. Both articles are made in the extensive pine forests of South Carolina, and brought to this market for sale or shipment.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.O., August 28.

THE business done this week has been encouraging to sellers. The cinchona sales left that drug in a decidedly improved position, somewhat higher rates having been obtained for good working bark. Last week's transactions in quinine were the cause of the improvement; but during this week speculation in the alkaloid has not been so extensive, yet the prices have been maintained, and are even a little higher. Shellac continues on the upward way, and is worth about 3s. more to-day than a week ago. Several drugs—such as jalap, senega, and galangal—can only be bought for more money, this being due partly to speculation, but mainly to rumours of deficient supply. Amongst spices, we place pepper at an easier shade, nutmegs and mace are unchanged, and cinnamon has advanced a few pence. Lemon and bergamot oils, in sympathy with the discouraging reports from the orange groves, have become dearer, and oil of citronella is also dearer; so are several of the varnish gums—in fact, all round there is a tendency towards higher prices, and there is general satisfaction with the amount of business done.

THE CHEMICAL UNION.—The Press Association reports that "the opposition of the papermaking interest to the proposed Chemical Union is having a marked effect. Already the promoters of the Union have been compelled to alter their original arrangements, according to which the works were to be transferred on September 23. A hitch, however, has arisen in the negotiations with several of the leading chemical manufacturers, who now hold aloof from the scheme, and the date for the completion of the transfer has consequently been indefinitely postponed." This has caused a good deal of surprise, and has been the subject of much discussion and speculation; but, in chemical circles, there is little doubt about the ultimate success of the scheme, as the negotiations are now rapidly approaching the final stage, although the transfer of the various works will probably be postponed until a later date than originally fixed. The prospectus is expected to be out about the end of next month.

ACIDS.—There is no change in the prices of *Citric* and *Tartaric*, although they are more firmly held. Messina reports regarding the future of citric materials are not very favourable; the lemon and bergamot crops are not of the best, and prices there have consequently advanced. Present firm prices are due to consumptive demand, and not to speculation. English citric acid is quoted 1s. 4½d. *Oxalic* acid is quoted at 3½d. in quantity, and is firm.

ALKALI AND BLEACH.—Our North of England correspondent gives a full account of the state of affairs, and we need only say that the London market is in full sympathy therewith.

ARROWROOT.—St. Vincent good to fine has sold this week at 2½d. to 2¾d.

ARSENIC.—Powdered white, may be obtained for 14s. 9d. per cwt.

BALSAMS.—To-day's quotations are: *Copaiba* 2s. 5d., *Peru* 5s., and *Tolu* 1s. 4d.

BENZOL continues firm, and 90-per-cent. is now quoted at 4s. 3d.

CALUMBA.—Fine bold root has been sold this week at 25s.

CAPSICUMS.—Sixty-six bags of bright Sierra Leone were offered on Wednesday, but could find no buyers, and were bought in at 25s.

CASCARA SAGRADA.—We hear from New York that there is little doing in this bark, the price on that market being that last quoted, 35s.

CINCHONA.—This week's sales were much heavier than those of a fortnight ago—a total of 2,773 packages, representing nearly 825,000 lbs. of bark, being offered, and 1,930 packages (nearly 700,000 lbs.) were sold, as will be seen from the following statement:—

	Packages offered	Packages sold
Ceylon bark	1,640	1,347
East Indian bark ..	173	169
Java bark	142	142
South American bark ..	818	372
Total	2,773	1,930

The bark was not above the average as to quality; indeed, much of it was of poor appearance, and scarcely worth working, while a great deal of South American stuff was brought forward again, for no other reason apparently than to remind people of its existence.

CEYLON.—*Original* bark was mainly of a chippy and dusty character, but there were a number of parcels of good stem quill. The prices obtained were for dull to fair coloured red chips, mixed largely with dust, 2d. to 2¾d.; partly quilly and clean chips and shavings, 3d. to 5d.; root (mostly dust) 2½d. to 4½d. *Renewed* chips of the same variety sold well under brisk bidding, chips going for 4½d. to 6d.; several fine parcels of dusty to bold and clean chips sold at 1d. and 2d. higher. Ordinary *Grey* chips changed hands at 2½d. to 3½d., some less broken at 3d. to 4d., and mossy bark at 3½d. to 6d. Of renewed bark, which may be mentioned under this heading, there was a fair variety as may be judged from the fact that one lot sold at 9d., others being disposed off at prices down to 6d. (this for shavings and quill), while chips fetched 5d. to 6½d. *Hybrid*, ordinary broken branch and stem quill and chip mixed with dust, 3½d. to 4½d.; fair to bold and clean renewed stem, 5½d. to 7d.

EAST INDIAN.—The bark offered consisted of crown, officinalis, Ledger, and succirubra, original and renewed, and as we have stated, all but four parcels of it was sold. This was because of its generally sound character; thus fair chips and shavings of original red stem sold at 2½d. to 5d. (a few bales of low quality at 2d.), and renewed at 4½d. The grey sorts were mostly damaged, but where not so 2½d. to 3½d. was paid for them, the latter price being for nice mossy bark. Original Ledger chips sold at 7½d. to 9d., and there were bales of this variety which sold at 10½d., 1s. 1d., and 1s. 2d., prices which rather astonished those who did not buy.

JAVA.—Calisaya chips, partly renewed, 6d.; red, small shavings and dust, 4½d. to 5d.; root bark in coarse powder, 7½d.

SOUTH AMERICAN.—The finest-looking bark shown was in this section, there being a large number of packages of nicely quilled cultivated Bolivian Calisaya. Some Cuprea chips which have been lying in London for ten years nearly, sold at 3½d. to 4d., and the quill referred to at 6½d. and 7½d. for thin and partly broken, and at 8d. to 9d. for bold and better-matured bark. Columbian sorts sold poorly—hard Pitayo at 3d.

All the prices quoted are decidedly above those obtained at the last sales, doubtless owing to the extensive speculation in quinine. We may place the increase at between 7½ and 10 per cent., the unit being somewhat over 1¾d.

The exports of bark from Ceylon during the month of July were more than twice as large as during the corresponding period last year, yet the total exports for the first seven months of the year are much below what they were up to the end of July, 1889. In the latter year 5,188,438 lbs. were exported in the seven months; but this year 4,815,062 lbs. only have been exported.

CINNAMON.—The quarterly auctions were held on Monday, when 1,270 bales of full quills and 323 parcels of chips were offered. The supply was about 100 bales short of what was offered at the May sales, and the demand was good, prices

ruling $\frac{1}{2}$ d. to 1d. per lb. higher all over. Nearly 1,000 hales of the Ceylon were sold: ordinary firsts, 8d. to $8\frac{1}{2}$ d.; fair, 10d. to $10\frac{1}{2}$ d.; good to fine, 1s. to 1s. 5d.; superior, 1s. 6d. to 1s. 7d.; ordinary seconds, 7d. to $7\frac{1}{2}$ d.; fair, $8\frac{1}{2}$ d. to 10d.; good to fine, $10\frac{1}{2}$ d. to 1s. 1d.; superior, 1s. 2d. to 1s. 4d.; common to fair thirds, $5\frac{1}{2}$ d. to 8d.; good, $8\frac{1}{2}$ d. to $10\frac{1}{2}$ d.; superior, 1s. 2d.; common to fair fourths, $5\frac{1}{2}$ d. to $7\frac{1}{2}$ d.; good to fine, 8d. to $10\frac{1}{2}$ d.; superior, 11d. About 200 packages of chips were sold: fair, $2\frac{1}{2}$ d.; damaged, $2\frac{1}{2}$ d. to $2\frac{3}{4}$ d.; and cuttings and quillings, $5\frac{1}{2}$ d. to $7\frac{1}{2}$ d.

CLOVES.—A considerable amount of business has been done in this article, both on spot and for forward delivery, the market being firmer, and prices in some instances a fraction of a penny higher. The spot price is $5\frac{1}{2}$ d. to $5\frac{3}{4}$ d., and for August-October the price has gone as high as $5\frac{1}{2}$ d. There were only 129 packages of common dark Zanzibar offered in auction, and they sold readily in auction afterwards at 5d. and $5\frac{1}{2}$ d. Part of 304 bales of stems sold at 1 $\frac{1}{2}$ d.

CORIANDER.—One hundred bags ordinary Mogadore offered and bought in at 10s.

EUONYMUS (WAHOO BARK).—The root bark is scarce, and in good demand at 1s. 3d. in New York. In consequence of this an advance in the price of enonymin would not be surprising.

GALANGAL.—The price is rising; to-day's quotation is 16s.

GINGER.—There is a very dull market this week, only 38 cases of Cochin, small to medium limes, mostly untrimmed, selling at 20s. and 21s.

GUMS (VARNISH).—The supplies offered at to-day's sales consisted of gum acroides, 45 packages; animi, 146 packages; copal, 1,267 packages; damar, 394 packages; kowrie, 780 packages; olihanum, 852 packages; and grass tree, 85 packages. Two-thirds Zanzibar *Animi* were sold: fair bold amber-like sorts, 13l. 10s. to 15l.; fair medium, 12l. to 12l. 7s. 6d.; bold red, 10l. 12s. 6d. to 10s. 17s. 6d. *Copal*: Partly sold; dark Manilla at 38s.; fair clean amber, 41s. to 49s.; small to bold chips, 22s. to 27s. 6d.; blocky, 20s. *Damar* did not meet with any buyers, nor did *Acroides* and the *Grass-tree* gum. 500 cases of *Kowrie* were sold at prices from 3s. to 7s. dearer, as the following shows: fair to good scraped, 80s. to 87s.; fair to good selected amber, 97s. to 107s. 6d.; fine, 120s. to 140s.; fine pale amber, 8l. 10s.; fine pale, 10l. 10s.

INDIARUBBER.—This article has for some weeks back been in good demand at slightly-advanced rates, and the reports from the collectors do not give any hope of an increase in the supply. Prices are therefore firm, old *Pará* being 4s. At the sales last week there was good business done in other sorts, at well-maintained prices: fine Columbian, 3s.; and virgin Mattagrosso, 3s. $7\frac{1}{2}$ d. *Balata* (Borneo) has sold for 1s. 9d., and good Pabang *Gutta-vercha* at 5s.

INDIGO.—We are dealing with an exceedingly firm market here at present, this position being largely influenced by the highly unsatisfactory reports from the manufacturing districts in India, where, owing to rain and flood, several works have been temporarily closed, and others are working at great disadvantage. Meanwhile crops are jeopardised, and the yield in any circumstance will be below the average.

ISINGLASS.—The sales were held on Tuesday, about 340 packages being offered, and part of what was sold met an advance of from 1d. to 4d. per lb. *Brazil*: Firm pale *Pará*, 3s. 1d. to 3s. 2d.; good pale tongue, 4s. 5d.; medium, 2s. 10d. to 3s. 2d. *Penang*: Best kinds were not in great demand, and prices were somewhat lower; firm pale, 4s. 9d. to 4s. 11d.; medium, 4s. 1d. to 4s. 6d.; common, 3s.; best tongue, 4s. 6d. to 5s. *Bombay*: New tongue, medium quality, 2s. 4d.

JALAP.—Sound tubers of good weight and colour cannot be bought for less than 1s. 9d. this week, and the demand continues. The New York market is almost bare of the drug, there being only one holder.

MENTHOL.—The last transactions in good dry crystals, were at the rate of 7s. 9d. per lb.

NITRE.—There is very little arriving, and reports from India are to the effect that the prices have declined a little,

but there is no corresponding reduction in the London market, last week's prices still ruling.

OIL (OLIVE).—Reports from the fields of production show that the Naples crop is a good one; the same may be said of Sicily and the Ionian Islands, but the Levant crop has been seriously damaged, and prices have advanced. So far as our own market is concerned, we have no change to report.

OIL (PEPPERMINT).—H.G.H. is firmer, and 11s. $7\frac{1}{2}$ d. has been refused in London.

PEPPER.—There was a tendency to weakness in the price for *white* at the beginning of the week, but $6\frac{1}{2}$ d. on the spot has been paid, and $6\frac{7}{8}$ d. for September-November. *Black* is firmer; spot Singapore, $5\frac{1}{2}$ d.; Acheen, $4\frac{3}{4}$ d.

PIMENTO.—500 bags sold in auction at $2\frac{7}{8}$ d. to 3d. for ordinary to medium, and 3d. to $3\frac{1}{8}$ d. for fair to good.

QUININE.—The speculative demand has abated, and since our last report about 100,000 oz. are said to have been sold; *German* spot, at 1s. $1\frac{1}{8}$ d. and 1s. 2d.; November, 1s. $2\frac{1}{2}$ d. The market is firm, but the higher-priced brands of the alkaloid are obtainable at the last quotations.

SENEGA.—Owing to the reports from the United States, none of this root is being parted with at less than 1s. 10d. It appears that merchants in the Western States are buying up all that they can get, with the object of forcing up the price when the Winter demand becomes more manifest; in sympathy with this, London and New York holders ask more money for the drug. It is possible that they may carry this game too far, as quillaia is an efficient substitute for senega, and would doubtless be used as such if the price of the latter became exorbitant.

SHELLAC.—At the public sales on Tuesday, 260 chests (a little more than a third of the offers) sold at from 3s. to 4s. above the last rates; second Orange, good bright, worked, 100s. to 105s.; unworked, 100s. to 105s.; worked AC Garnet, free, 98s.; block, 94s. to 95s.; good third Button, 102s. 6d. to 105s. For delivery, considerable transactions have taken place; TN Orange, December, 105s.; and AC Garnet, October, 99s. The market closes with a tendency towards higher prices. The shipments from Calcutta for the first half of August have been: to London 1,400 cwt., against 500 cwt., and to the United States 1,700 cwt., against 300 cwt. last year. Holders in Calcutta are sanguine of higher prices later on. The sticklac crop is very small and little obtainable in Calcutta at any price.

SPERMACELE.—A New York correspondent reports that American makers are holding firm at 1s. 7d., but it is possible to buy from second hands at 1s. 6d. Some time ago the makers were willing to sell at 1s. $3\frac{1}{2}$ d., but, thinking European stocks were greatly reduced, they concluded to hold firm for the present at 1s. 7d.

TEA.—Congous are displaying quite an unwonted amount of life, and common tea is up fully $\frac{1}{2}$ d. per lb., a smart rise having taken place in the terminal market, mainly in consequence of the rise in the Exchange with the East tending to check the import of common tea. There is, however, any quantity of stock of low grades, which has accumulated during the last few years season after season, and which will flood the market if prices do but go a little higher. Siftings of new Moning and Kaisow, at 4d. to $4\frac{1}{2}$ d., show capital value, and some good medium Monings with very useful liquors may be had from 7d. to 9d. Scented Capers are dearer for lower grades, with nothing to be had under 7d., and firm for better grades. A few new green teas, Teenkai sort, have sold in public sale at full rates. Old Pingsueys are dearer. The Indian market has recovered somewhat from the drooping tendency of last week, though useful Pekoe Souchongs may here and there be picked up at 7d. per lb., and fair liquoring Pekoes at 9d. Broken Pekoes are dull, and the Irish trade is still very quiet. Ceylons are distinctly dearer for all lower-priced teas, and prophets are not wanting who foretell a very big rise as imminent. It is not unlikely that we shall have a dearer market, but there is no probability of an advance at all commensurate with that of this time last year, when fair common leaf Ceylons had been selling at $5\frac{1}{2}$ d., not 8d., as of late.

WAX (JAPAN).—There has been a better demand this week, with transactions at 42s. to 44s., and it is only obtainable now at the latter price.

CHEMICALS IN THE NORTH OF ENGLAND.

THE market for heavy chemicals, on the whole, continues very firm. There has been a sharp advance in the price of caustic soda for prompt shipment, and bicarbonate of soda and soda crystals are also dearer. Bleaching-powder, however, has declined in value, but prices seem to have touched the bottom for the present.

BICARBONATE OF SODA dearer, and prices firm for prompt. Quotations are 5*l.* 15*s.* to 6*l.* per ton, less 2½ per cent. discount, f.o.b. Liverpool, for 1-cwt. kegs, with usual allowance for larger-sized packages.

BLEACHING-POWDER still continues flat and prices weak. A considerable quantity has changed hands on Tyneside at as low as 5*l.* per ton in softwood casks for prompt shipment. Market is now stiffer, and a little more demand would soon raise the price. The Lancashire market is also easier, but makers are obtaining much better prices than can be had on Tyneside: for prompt delivery 5*l.* 7*s.* 6*d.* to 5*l.* 10*s.* per ton in softwood casks, on rails Widnes and St. Helens, and 5*l.* 17*s.* 6*d.* to 6*l.* per ton in hardwood casks, f.o.b. Liverpool, less 2½ per cent. discount. Glasgow prices, 5*l.* to 5*l.* 5*s.* per ton on rails. Tyne quotations, 5*l.* to 5*l.* 2*s.* 6*d.* per ton in softwood casks, and 5*l.* 5*s.* to 5*l.* 7*s.* 6*d.* per ton in hardwood casks, f.o.b. Tyne. For delivery ex ship Thames 5*l.* 10*s.* to 5*l.* 12*s.* 6*d.* per ton. For delivery October to December makers ask 5*l.* 15*s.* per ton on rails Widnes and St. Helens, and 6*l.* per ton f.o.b. Liverpool and Tyne, with a further advance of 5*s.* per ton for delivery over next year.

CAUSTIC SODA has had a sharp advance in price for prompt delivery, and some heavy purchases have been made on Russian account. For prompt and September 60-per-cent. is quoted 9*l.* 5*s.* to 9*l.* 7*s.* 6*d.* per ton; 70-per-cent., 10*l.* 7*s.* 6*d.* to 10*l.* 10*s.* per ton; 74-per-cent., 11*l.* per ton, all less 2½ per cent. discount, f.o.b. Liverpool; 77-per-cent. white has had an advance of 10*s.* per ton, and makers are now quoting 11*l.* per ton for delivery from now to end of year. Ground and packed in 3-4-cwt. barrels 14*l.* per ton net cash, f.o.b. Tyne; 70-per-cent. for delivery October-December quoted 10*l.* 5*s.* per ton; and 10*l.* 10*s.* per ton for 1891.

CREAM CAUSTIC.—Firm at 8*l.* 5*s.* to 8*l.* 7*s.* 6*d.* per ton on rails, and 8*l.* 10*s.* to 8*l.* 12*s.* 6*d.* per ton f.o.b. Liverpool, less 2½ per cent. discount.

CHLORATE OF POTASH.—Steady at 5*d.* per lb., less 5 per cent. discount for prompt, 5½*d.* per lb. Oct.-Dec., and 6*d.* per lb. over 1891, at usual ports of shipment.

HYPOSULPHITE OF SODA.—Steady, and firm in price—6*l.* per ton in 1-cwt. kegs, and 5*l.* 10*s.* per ton in casks, f.o.b. Tyne, less 2½ per cent. discount, and 6*l.* 5*s.* and 6*l.* 15*s.* per ton for casks and kegs respectively, delivered Manchester and Liverpool, less 2½ per cent. discount.

SODA ASH.—Steady, and prices unchanged. Caustic 1¼*d.* to 1½*d.* per degree, and carbonated 1¾*d.* to 1½*d.* per degree, less 2½ per cent. discount f.o.b. Liverpool. For Oct.-Dec. makers ask 1¼*d.*, and for the whole of next year 1¾*d.* to 1½*d.* Newcastle brands of carbonated quoted 1¾*d.* per degree, less 5-6 per cent., for prompt; 1¾*d.*, less 5 per cent., for Oct.-Dec.; and 1¾*d.*, less 3½ per cent., for 1891.

SODA CRYSTALS are rather stronger in price in the Lancashire market. For early delivery makers ask 3*l.* 1*s.* 3*d.* per ton on rails, and 3*l.* 6*s.* 3*d.* per ton, net weight, f.o.b. Liverpool, packed in 3-cwt. barrels; and for the whole of September 3*l.* 7*s.* 6*d.* to 3*l.* 10*s.* per ton is asked. Tyne makers quote 2*l.* 15*s.* 6*d.* to 2*l.* 16*s.* per ton, gross weight, prompt shipment, and 2*l.* 16*s.* 6*d.* per ton, delivery Oct.-Dec. For delivery ex ship Thames the price is 3*l.* 2*s.* 6*d.* per ton, gross weight, in casks.

SULPHATE OF SODA.—Slightly easier at 31*s.* to 32*s.* 6*d.* per ton, in bulk, on rails at Widnes and St. Helens, and 50*s.* to 52*s.* 6*d.* per ton, ground and packed in casks for export, f.o.b. Liverpool. There is rather more doing in this article on Tyneside, but prices have not varied much. Makers ask 30*s.* per ton in bulk, and 40*s.* to 41*s.* per ton for ground sulphate in casks, f.o.b. Tyne, prompt and September delivery. For delivery Oct.-Dec. lowest price is 40*s.* per ton, and 1891

45*s.* per ton on rails Widnes and St. Helens, also f.o.b. Tyne.

SULPHATE OF COPPER.—Easier at 17*l.* 15*s.* to 18*l.* per ton for prompt, less 5 per cent. discount. For delivery early 1891, 19*l.* to 20*l.* is wanted.

MISCELLANEOUS CHEMICALS.—Blanc fixe, 7*l.* 10*s.* per ton f.o.b. Tyne. Carbonate of magnesia, 37*l.* 10*s.* f.o.b. Tyne. Chloride of barium, 8*l.* per ton f.o.b. Tyne and 8*l.* 7*s.* 6*d.* per ton f.o.b. Liverpool. Chlorate of baryta, 8*d.* per lb. f.o.b. Liverpool. Chloride of calcium, 2*l.* 2*s.* 6*d.* to 2*l.* 5*s.* per ton f.o.b. Liverpool. Nitrate of baryta, in crystals, 18*l.* 15*s.* per ton; ground, 19*l.* 5*s.* per ton f.o.b. Tyne. Nitrate of soda, 8*l.* 7*s.* 6*d.* to 8*l.* 10*s.* per ton ex quay Liverpool or Garston. Sal ammoniac, 37*s.* and 35*s.* per cwt. for first and second quality respectively, f.o.b. Liverpool. Silicate of soda, 140°, 4*l.* 2*s.* 6*d.* to 4*l.* 5*s.* per ton f.o.b. Liverpool; 140°, 4*l.* per ton f.o.b. Tyne; 100°, 3*l.* 7*s.* 6*d.* per ton f.o.b. Tyne; 75°, 2*l.* 10*s.* per ton f.o.b. Tyne. Sulphate of alumina, 5*l.* 10*s.* to 6*l.* per ton f.o.b. Liverpool, according to make; 4*l.* 10*s.* per ton f.o.b. Tyne. Sulphate of ammonia, 11*l.* 15*s.* to 12*l.* per ton f.o.b. Liverpool. Sulphite of soda, 5*l.* 10*s.* per ton f.o.b. Liverpool. Sulphur (recovered), in bulk, 4*l.* 7*s.* 6*d.* to 4*l.* 10*s.* per ton alongside ship in Liverpool; roll, 6*l.* 5*s.* to 6*l.* 10*s.* per ton f.o.b. Liverpool; flowers, 8*l.* 5*s.* to 8*l.* 10*s.* per ton f.o.b. Liverpool; rock, in bags, 4*l.* 3*s.* 9*d.* per ton f.o.b. Tyne.

AMSTERDAM CINCHONA SALES.

AUGUST 28.

At the auctions to-day 4,289 packages of bark were sold, the prices obtained all round being at a unit equivalent of 10*c.* Manufacturers' bark in chips, broken quills, and quills sold at from 5*c.* to 83*c.* per half-kilo., and root bark at from 29*c.* to 73*c.* Druggists' quill, broken quill in chips sold at from 11*c.* to 61*c.* and root bark for druggists' use at 10*c.* to 34*c.* per half-kilo. The principal buyers were the Brunswick and Frankfort works, Messrs. Schepp & Zoon, and the Auerbach works.

NEW COMPANY.

THE CENTRAL DRUG COMPANY (LIMITED).—Capital, 2,000*l.*, in 1*l.* shares. Object, to acquire the business of a drug-merchant, now carried on by George William Spraggett, at Hanley, Staffordshire, and to extend the same. The first subscribers are:—Geo. W. Spraggett, Hanley, 1,600 shares; C. C. Spraggett, Footbridge, Salop, Catherine E. Spraggett, Leamington, Florence E. W. Spraggett, Blyth Bridge, Staffs, Catherine W. Spraggett, Blyth Bridge, Wm. Cooper, Hanley, Wm. Huntbach, Hanley, solicitor, who take one share each; and David H. Oxen, Newcastle, Staffs, chemist, fifteen shares.

NEW ARISTOLS.—It is reported that success has attended the efforts of a well-known German firm of chemical manufacturers in the direction of the preparation of bodies of the aristol type, which contain iodine in large percentage that may readily be given up in the system. There are altogether three new substances which are ready for clinical experiment—viz., diiodophenoliodide, diiodoresorcinmonoiodide, and iodosalicyliciodide. Of these we shall give some account in a future issue.

DR. THOMAS CARNELLEY, professor of chemistry at Aberdeen University, died suddenly on Wednesday in his thirty-eighth year. He was educated at King's College School, London, Owens College, Manchester, and at Bonn. After leaving Bonn he became a demonstrator in the chemical laboratory of Owens College. In 1879 he was elected to the professorship of chemistry in Firth College, Sheffield, and in 1882 to the chair of chemistry in University College, Dundee. Two years ago the deceased was called to the chemistry chair in Aberdeen, in succession to Professor Brazier. Dr. Carnelley was a man of exceptional ability, and had the power of inciting the spirit of research in his pupils. He had done excellent work in his short life, and was engaged on a colossal book dealing with chemical and physical constants, part of which has been published.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest; we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

The Extra Sixpence on Spirits.

SIR,—In *re* the proposed drawback on our S.V.R. permits, I talked it over with our revenue officer, when he raised this difficulty between us—What is to prevent a dishonest chemist supplying his neighbour, a dishonest publican (who uses S.V.R.), with spirit of wine, and then dividing the drawback between them? Of course it is such shady ones that the Chancellor of the Exchequer has to think of in making any special changes. Yours truly,

WILTS. (121/30.)

165/4. *A Worker*.—We cannot compliment you on the soundness of your argument. If chemists are oppressed by the spirit duty, let them claim justice; if it is right that they should be granted a monopoly in the sale of any articles, let that be claimed. But to say to the Legislature, "We will submit to the injustice if you will grant us the *quid pro quo*," would be absurd as well as vain. The patent-medicine makers must be allowed to conduct their businesses in the manner which they think best.

The Sale of Laudanum under a Medicine Stamp.

SIR,—I am pleased to read your comment on the inquest held at Grantham on August 14. I am sure that every chemist in business is looking forward to a very clear case for the Society, and as the matter is under the consideration of the Pharmaceutical Council, that body having been memorialised by Glamorganshire chemists on that point, I have no hesitation in hoping that the Council will do their duty in this case. Yours, &c.,

SPONDILIX. (165/2.)

Australian Henbane.

SIR,—Whilst passing a water-mill in the neighbourhood of Spilshy the other day I was much surprised to find a great quantity of fine plants of *Hyoscyamus niger*, and upon inquiring of the owner of the mill, who called them Australian thistles, he informed me that they came up after he had thrown some screenings of Australian corn out about two years ago.

Is not this rather peculiar, or have you heard of it before?

Yours faithfully,

PHENIX. (120/53.)

Juries.

SIR,—Your correspondent, "A Lover of Justice," has my sympathy. I might, were it not for the sake of trespassing on your valuable space, quote one or two instances, showing the risk and inconvenience to the public caused by chemists being summoned to sit on a jury for days together. Shortly after I entered the trade this anomaly perplexed me, and still I fail to see on what grounds the line was drawn. With all deference to Major men, I take it that chemists and

druggists (especially those who cater for doctors) have as great a claim for exemption as pharmaceutical chemists. I humbly appeal to our Parliamentary committee not to overlook this clause in the Pharmacy Bill now being framed.

Yours faithfully,

VERNET. (121/74.)

[The ground on which the line was drawn was simply that when the exemption was granted the only legal register of chemists in existence was that of pharmaceutical chemists.—Ed. C. & D.]

Registration of Chemists and Druggists.

SIR,—Referring to "Fairness to All's" letter in yours of August 23, will he (and he must, according to his letter, if his "mental calculation" is fair to all) say that if he stops payment, his assistant, who in his absence must be qualified, if his business is to be kept fully going, would have to come forward and pay up?

Mr. Walker does not, as your correspondent says, "entirely ignore clause 4." In an earlier part of his letter "Fairness to All" states Mr. W. "could not have been out of his teens in 1868." In this he is correct, and, therefore, ought to have known Mr. W. is shut out from clause 4, as not having, at the passing of the Act, been of full age.

"Fairness to All" asks, "where does his claim lie?" Let him read the correspondence printed in yours of July 19, and he will find the grounds of claim are based on the most recent judicial interpretation of the 1868 Act we have. There is no doubt Mr. Walker has proved he was engaged in the business of chemist and druggist, and also keeping "open shop," before the passing of the Pharmacy Act, which is all the Act requires. It is a mistake to think it says he must have done these on his own account. Even the phraseology of the 1868 Act shows that, being in business, and being in business on one's own account, are different. For confirmation of this I ask your readers to carefully read the Act, and it will be found "on his own account" does not occur with reference to registration, but only with reference to admission into the Pharmaceutical Society.

Further, to show there is such a thing as being in business and yet not on own account, I refer to the recently passed Pharmacy Act for Ireland, in which the Legislature has been careful to add to "in business as a chemist and druggist" (in declaration forms), "as principal," or, "on my own account." Why this, if a declaration such as Schedule C of the Pharmacy Act 1868 meant that? Since then it is possible to be (or have been) engaged in the business of a chemist and druggist, and yet not on one's own account, and in the absence of anything in the Pharmacy Act 1868 to say it must have been as principal, I hold Mr. W., and all similarly placed, are entitled to registration. I quite admit that this is not the view hitherto held by the trade, any more than that the new (Wheeldon) interpretation of clause 15, as to qualification of assistants, is that formerly held by the trade. We have, however, to do only with the judicial interpretation of the Act, and notwithstanding "Fairness to All's" last paragraph, I think we should have this point settled by a test case, and, as it affects more than Mr. W., I think with "Lincolnshire" that all similarly placed should at once communicate with Mr. W., as "Lincolnshire" suggested, urging him to go on with his case.

Without registration, that which it was lawful to do before the passing of the 1868 Act, and which up till the Wheeldon case has not been considered unlawful, now becomes unlawful, even as assistants, and I ask how your correspondent thinks this "Fairness to All"?

St. MUNGO. (121 64)

[If any of these gentlemen are really determined to test this question, we shall be happy to give space for the announcement of their intentions. But the discussion of the point as a theory has gone far enough. The basis of the contention is extremely fragile. The Act of 1868 defined the persons entitled to registration (other than those registered under the Pharmacy Act 1852 as pharmaceutical chemists and associates) as "all persons who at any time before the passing of this Act have carried on in Great Britain the business of a chemist and druggist in the keeping of open shop for the compounding of the prescriptions

of duly qualified medical practitioners." We should not expect that any court would regard any person employed in such a shop as the "keeper of the open shop," especially in view of the next section, which makes a special provision for assistants. This, however, is only our opinion, and we do not wish to lay it down so authoritatively as does our correspondent on the other side, when he declares that "there is no doubt Mr. Walker has proved he was keeping open shop." We do not see how the Wheeldon case affects the matter. That only settled who was "the seller"; it did not say that the seller was also keeping open shop. "St. Mungo" is in error, too, when he assumes that the Wheeldon decision reversed the view held by the trade. It supported the opinion of those who had studied the Act; we do not know whether they were a majority or a minority of the trade.—Ed. C. & D.]

Licences.

SIR,—I have just received my notice for renewal of patent-medicine licence. This licence expires on August 31. The methylated spirit licence expires September 30.

It would be a convenience surely worth striving for to have both renewals falling due on the same date. The retailer would be saved considerable trouble and, perhaps, a little expense, and the work of the Excise department somewhat lessened also.

Yours faithfully,

Clifton, Bristol, Aug. 27.

T. C. RICHARDS.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Calomel Pills.

Mr. Henry Machon sends us a sample of calomel pills made with mannæ pulv., glycyrrh. decort., and thick mucilage of gum tragacanth, prepared as follows:—

Gum. tragacanth. elect.	..	..	..	3ss.
Aquæ frigid.	..	..	..	3ix.—3x.

The result is a splendid mass. The pills may be boxed directly they are made, and will keep their shape indefinitely. [The pills are good, and take on a good surface with French chalk and starch. The use of gum for calomel is objectionable, but in this instance the pills disintegrate in water in the course of an hour.]

114/31. *M. & H.*—Resinous matter is precipitated in the nux vomica mixture, which may be filtered.

LEGAL QUERIES.

114/45. *Vir.*—The use of the title "medical hall" by unqualified persons is not forbidden by law.

158/40. *A. H.*—We do not consider that the assumption of the title "veterinary chemist" is an infringement of the Veterinary Surgeons Act.

117/59. *Enquirer.*—You can trade under any name you like, and, of course, can buy or sell under that assumed name, so long as you are not seeking to deceive the public or take any unfair advantage of any rival.

119/15. *A. B.*—Unless expressly excluded by the terms of the deed, it would be obviously fair and probably legally enforceable that the firm should pay for advertising material ordered by the owner of the business before the partnership commenced but delivered afterwards.

121/34. *Nothing.*—You are not entitled to registration. See this journal, July 19, 1890, pages 86 to 88.

122/2. *Butter.*—You will find your questions answered if you will refer to this journal, August 9, 1890, page 209, and to THE CHEMIST AND DRUGGIST DIARY, 1888, article, "Apprenticeship," page 247. The apprentice cannot be compelled to accept a substituted master, and if the master sell his business during the term of the apprenticeship, he may be required to make some equitable arrangement with his apprentice.

121/68. *Tablet.*—We do not know what title (if any) Messrs. Frazer & Co. have registered as a trade-mark; but it is pretty certain that they could not establish an exclusive right to the monopoly of the words "Sulphur Tablet." At the same time, it must be understood that the courts would regard unfavourably any attempt on the part of a rival to secure any part of the advantage which the introducers of the article have created.

122/58. *Pills.*—For answers to your first three questions you must study the Pharmacy Act. The commentary on it in THE CHEMISTS' AND DRUGGISTS' DIARY of 1888 will help you considerably. "Sweets," as understood by the Excise, means "any [alcoholic] liquor made by infusion, fermentation, or otherwise from fruit or sugar, or from fruit or sugar mixed with other materials." It does not apply to any lozenges.

122/48. *C. G.*—The proprietors of Carter's "Little Liver Pills" would probably try to prevent anyone else using that title. Whether they would succeed depends on whether a court might take the view that those words constituted an essential part of their trade-mark. It can hardly be regarded as fair to use a title so distinctive, which has been made of value by the expenditure of much money.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

122/17. *Omega.*—Glycerine Suppositories (soap basis). September 22, 1888, page 385; March 16, 1889, page 371; and April 20, 1889, page 559.

118/27. *Night Years' Subscriber.*—Nerve-destroyer (dental).—October 26, 1889, page 600.

121/73. *E. Blade.*—Depilatory.—March 15, 1890, page 347.

120/56. *Dogs.*—Glycerine Suppositories.—May 17, 1890, page 679. The dose of areca nut for dogs is 15 grains to 3ij. according to size.

121/57. *Frank English.*—The Fixing-bath retains a sufficient quantity of silver in solution to make it worth the while of professional photographers to recover it, and they generally do. The metal is precipitated as sulphide by the addition of sulphurated potash, and the sulphide, after collection and drying, is sold to a refiner. Photographers generally have a tank for wash liquors, and work them up periodically. In your experiments you overlooked the fact that sodium hyposulphite is a solvent of the haloid salts of silver.

122/35. *C. C. D.*—Carbolic Colloid.—Equal parts of carbolic acid (melted) and collodion.

121/53. *Lux Benigna*.—You do not tell us the quantities used of the ingredients in the pill, but apparently the aloes is the cause of the pitting. In such cases the use of proof spirit, containing 20 to 30 drops of liquor potassæ and a drachm of simple syrup in each ounce, is useful. Try this, and let us know your result.

120/44. *K. D. K.*—Kieselguhr is the name of the infusorial earth used in making dynamite. A good deal of it is found in Aberdeenshire, but the principal source of it is Norway.

120/39. *Salicylic*.—We have not published a formula for paste *Kid-reviver*, but there should be little difficulty, after a little experiment, of producing a serviceable article. Make a thick paste with tragacanth, by digesting $\frac{1}{2}$ oz. of the gum in 5 oz. of water until it is quite soft. Evaporate 10 oz of ordinary black ink to a fourth of its bulk, and separately mix 2 oz. of vaseline and 1 oz. of soft soap; incorporate the tragacanth paste with this, little by little, in a large mortar, then add the concentrated ink in the same way, and perfume with oils of wintergreen and cloves. Aniline black may be used in place of the ink.

120/20. *R.*—There is little objection to the use of rubber for aerated-water bottle-stoppers, for manufacturers have succeeded in getting the odour so fixed or removed that the water is not affected. You should communicate with some of our advertisers.

123/14. *R. M. Ling*.—Write to all of the colleges. We do not think that the London one will accept your certificate in January next, but you can try. Dick's College, Edinburgh, would accept the certificate, and the instruction there is sound.

119/31. *Student*.—How could you take a photograph if light had no effect upon silver salts? Your bath becomes brown because you do not work in non-actinic light.

120/8. *Danver*.—Simple aëration of the wine is the plan to follow. Any attempt to set up secondary fermentation will ruin the flavour.

119/14. *Inquirer*.—The Chemical Society does not require applicants for the fellowship to be either Minor or Major men, provided their qualifications are such as to warrant their election. Several chemists and druggists were elected during the past session.

118/54. *T. E. D.*—We have not seen any books on chiropody. The liniment is doubtless meant.

118/39. *E. H.*—Although the mixture of antipyrin and spirit of nitrous ether becomes green, it has been proved to be harmless. A cyanogen compound is formed during the reaction, but in very minute quantity.

163/5. *Kimia*.—It was the rarest chance to get a homogeneous preparation working by the old formula for *Lin. Potass. Iodid. c. Saponi*, and the fact of the matter is that the Pharmacopœia made a mistake, as the original preparation was made with curd soap, not with Castile soap.

121/15. *Wills*.—Lemons are at their best for pressing in the month of November. See the article by Mr. Howell Williams, communicated to the last meeting of the Pharmaceutical Conference.

121/4. *East Anglian*.—We shall keep the matter in mind; but you do not appear to conceive that what you require can be used by very few persons only.

117/42. *Juglans*.—Now that you have made a tincture of the walnuts, your best plan is to evaporate it to a syrupy consistence, and mix with benzoated lard in the proportion given in the formula already printed.

121/25. *P. S.*—The General Medical Council is doing all in its power to prevent or discourage medical students from acting as assistants to medical men. Those who employ unqualified assistants endeavour to get men of good address and practical experience, for it is not a matter of examinations.

121/17. *Minor*.—*Scurf-pomade for Hair-dressers*.—One drachm each of white and red precipitate ointments, diluted with vaseline to 2 oz, and suitably perfumed.

113/62. *J. J. R.*—You will find the complete paper on the manufacture of water-gas in the "Journal of the Society of Chemical Industry" for January, 1888. It is published by Eyre & Spottiswoode, and costs 2s. 6d.

122/39. *Vulcanite*.—The *Metallic Sulphur* "used by indiarubber manufacturers for vulcanising, and supposed to be better than sulphur," is a mixture of sulphur and chalk, slightly coloured with blue lime.

122/44. *Nero*.—*To Dissolve Gum Animi*.—There are several kinds of this resin, but they may be divided into two groups—one insoluble, and the other partially soluble, in alcohol. The insoluble portion is known to be closely related to the resin of turpentine. The entire resin resembles copal, and should be treated like it—viz., by fusion, then allow to cool, and treat with the hot solvent, which may be spirit or turpentine.

122/43. *X.*—The readiest means of testing the genuineness, or otherwise, of gems is to try their hardness. A diamond scratches a ruby, a ruby a sapphire, and so on; but spurious gems are much softer, and have no effect on genuine stones. It is by the index of refraction that genuineness is determined with certainty—but most jewellers can judge by the lustre.

123/29. *Curious*.—Perhaps you have sometimes used precipitated sulphur and at other times milk of sulphur. The former is the bulkier. It should be rubbed up with the glycerine diluted with twice its volume of water.

Information Supplied.

105/50. *Supplying Paraffin*.—I find a marble valve to be preferable to a stop-cock, as suggested by you.

SPONDILIX. (165/2.)

102/11. *Chineolis Red*.—Is not this an error for chinoline red, a dye discovered by Dr. E. Jacobsen, of Berlin, in 1882, prepared by heating equal parts of benzotrichloride and coal-tar chinoline to 130° R.? The substance thus obtained crystallises in red-brown prisms with iridescent surfaces, is insoluble in ether, almost insoluble in cold water, but easily soluble in alcohol and acetic acid. It is allied to the chinoline blues and violets. E. J. W. (115/55.)

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

115/55. Information as to analyses of green walnut shells.

118/48. Makers of gelatine capsules for horse-balls.

122/1. Makers of stnds used by truss-makers.

118/3. Maker of a toilet soap branded "F. F. S."

123/40. Addresses of Irish-moss producers.

"THE HOUSE OF PEARS."

SOAPMAKERS TO THE PRINCE OF WALES.

Established 100 Years.

A VOICE FROM THE TRADE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—As a retail chemist and druggist, I should like to add a line to the notice of Messrs. Pears' establishment in your last issue.

It is quite natural that a journalist should make the most of the success of so advertising a firm; but, for my own part, I believe Messrs. Pears' success lies, to a considerable extent, in their uniformly just and liberal business policy in their transactions with the retail trade. I have dealt with them over twenty years. Of them a retailer may buy a not very large parcel (£5 gross) at the same rate as the large houses pay for, say, a £1,000 order. Some years ago the large stores combined to boycott the firm for this, and supplied their customers with a substitute made for this purpose. This did not do, and the stores were compelled very soon to return to the genuine article.

The soaps sent out by Messrs. Pears are always good alike. They have repeatedly referred to me individuals who have sent their orders direct to the firm. They always send a reminder of the dates when payments are due, and, in short, after a rather wide business experience, I consider them a *model wholesale house*. I think this word rather magnanimous on my part; they have just refused me a second card of "Bubbles."

Yours obediently,

REDHILL.

THOMAS PADWICK.

PAPAIN

(Dr. Finkler & Co.)

Acts in ACID, ALKALINE, and NEUTRAL SOLUTION, and is capable of digesting one thousand times its own weight of FRESH FIBRINE.

It is recommended by the most eminent ENGLISH and CONTINENTAL authorities in the treatment and cure of

DYSPEPSIA AND DIPHTHERIA,

and has been most successful in the treatment

Externally, of Diphtheria, Croup, Chronic Eczema, Psoriasis, Ulcers, Boils, Fissure of Tongue, Ear Diseases.

Internally, of Acid Dyspepsia, Chronic Gastric Catarrh, Anorexia, Dysentery, Chronic Diarrhoea, and other Diseases of the Digestive Organs.

Packed in bulk and bottles of 16, 8, 4, 1, and $\frac{1}{2}$ oz., or of 500, 250, 100, 25, and 15 grammes; each package has attached a **short and convenient test** for ascertaining quickly the efficiency of the **Papain**, and also an abbreviated report by E. G. Clayton, F.I.C., F.C.S., &c., treating on the value of Papain (Dr. Finkler & Co.) as a digestive ferment.

PILLS.—Papain (Dr. Finkler & Co.), packed in bottles containing 100, 50, or 25 pills of one or two grains each.

TABLOIDS.—Papain (Dr. Finkler & Co.), packed in bottles containing 100 and 25 tabloids of two grains each.

GLYCEROL.—Papain (Dr. Finkler & Co.) and Acid Glycerine, packed in 1-lb. bottles and Winchester quarts.

EXALGINE

Gold Medal, Paris Exhibition, 1889.

(BRIGONNET).—The new analgesic, manufactured by Messrs. BRIGONNET & NAVILLE, La Plaine St. Denis (France), recommended for Neuralgia, Sciatica, Angina, &c., by Bardet, Gaudineau, Binet, Dujardin-Beaumetz, Desnos, and lately by Prof. Fraser, M.D., F.R.S., F.R.C.P.E., of Edinburgh. (See *British Medical Journal*, February 15, 1890, page 344.)

J. Hurley, M.D., Queen Camel, reports very successful treatment of Sciatica, Lumbago, Neuralgia, Locomotor Ataxy, Gout in the hand. W. Paley, M.D., Ripon, of Sciatica. B. Walker, M.D., Kirkby Stephen, of Facial Neuralgia. J. J. Meacham, Surgeon, Manchester of Angina Pectoris and Neuralgia. Geo. R. Gordon, M.D., Manchester, of Henneronia and Neuralgia. J. Young, M.D., Edinburgh, of Neuralgia. A. W. Martin, L.R.C.P., Manchester, of severe Neuralgia.

Packed in **one-ounce tins only**, closed with label bearing name, address, and registered trade mark of Messrs. B. & N., St. Denis.

SALOL

manufactured by Messrs. L. Durand, Huguenin & Co., Basle. The new antiseptic and anti-rheumatic remedy, most successful in the cure

Externally, of Ulcers, Wounds, Skin Diseases, specially Impetigo, and Eczema;

Internally, of Articular and Chronic Rheumatism, Dysentery, Summer Diarrhoea, Cholera, Bleorrhagia, Gonorrhoea, Influenza.

Packed in card boxes of 7 lbs., 1 lb., $\frac{1}{2}$ lb., and $\frac{1}{4}$ lb., bearing the manufacturers' names.

TABLOIDS SALOL packed in bottles containing 100 and 25 tabloids of 5 grains each.

QUININE

Gold Medal, Paris Exhibition.

manufactured by the Fabbrica Lombarda di Prodotti Chimici, Milan. Quinine Sulphate, Bisulphate, Bromide, Carbolate, Muriate, Phosphate, Salicylate, Valerianate, &c., Quinidine, Cinchonidine, and Cinchonine Salts.

Packed in tins of 100 and 25 oz., or bottles of 1, $\frac{1}{2}$, and $\frac{1}{4}$ ounces.

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SOLE WHOLESALE AGENT FOR THE UNITED KINGDOM AND EXPORT.

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Hyposulphite of Soda.
Oxalate of Potash.
Hydroquinone.
Ammon. Muriate.
Acetanilide.
Boracic Acid
Tannin.

J. H. PESTALOZZI,
WAEDENSWEIL.

Sugar of Milk. Lactic Acid.
Terpinol. Terpinhydrate.

Potash Permanganate.
Acetate of Lead.
Glycerine.
Acetate of Amyl.
Chloroform.
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Essential Oils. Floral Waters. Pomades.
PERFUMES IN BULK.

ALMOND OIL, SWEET, and OLIVE OIL.

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OF EVERY DESCRIPTION, WHOLE, CUT, CRUSHED, OR POWDERED.

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ORIGINATORS AND

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Largely replacing the Mitcham Oil, 2 $\frac{7}{8}$ lb.

Hydrobromic Syrup of Hypophosphites.



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OL. LIMONIS RECT.

Fine quality, keeps well. 6/ lb.,
Bottles Free.

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DUNCAN, FLOCKHART & CO.,

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CHLOROFORM,

Prepared from Pure and Methylated Spirit.

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles corked and luted (stoppers attached), and in hermetically sealed flasks when required.

A.B.—We guarantee our Chloroform prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

CASCARA SAGRADA CAPSULES,

In Boxes, at 1/6 and 2/6. 14/- and 24/- per dozen.

Each Capsule equal to half a teaspoonful of Fluid Extract of Cascara Sagrada. The chief drawback to the use of this valuable drug, its unpleasant bitterness, is obviated when taken enclosed in Capsules.

SALICYLIC ACID

AND

SALICYLATES

MANUFACTURED UNDER KOLBE'S PROCESS BY

J. HAUFF, FEUERBACH - STUTTGART.

To be obtained through all Wholesale Houses in Great Britain and Ireland and from the SOLE AGENTS,

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MANUFACTURING CHEMISTS, WHOLESALE AND EXPORT DRUG MERCHANTS,
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Manufacturers of all Pharmaceutical Preparations on the best and most improved principles. Quotations on Application

DEALERS IN PURE CHEMICALS

For Medicinal, Photographic, and Commercial purposes.

Importers of Cod Liver, Castor, and Olive Oils; Extra Super Essence of Lemon and Bergamot; Otto de Rose, and all Essential Oils; Valerian Saffron; Vanillas; Fruit Essences; Carmine; Aniline Dyes; Bees' Wax, &c., &c.

Special Agents for Sicilian Sublimed Sulphur in 2-cwt. bags, and Rolled Sulphur in 3-cwt. casks. Most Favourable Quotations can be given on application.

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WAREHOUSES, LABORATORIES, AND DRUG MILLS,
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CITRATE OF MAGNESIA.

A good reliable quality, in 1-cwt. tins per cwt. 68/-
Or in 4-lb. or 7-lb. bottles „ 70/-
Extra Quality, containing an additional amount of Citric Acid... .. per lb. 11d.

Superior Grades at 1/2 and 1/4 per lb.

EFFERVESCENT SALINE (CHLORATED).

Price 1/2 lb.

A PERFECTLY DRY AND FINE POWDER.

The above may also be had with 5 per cent. extra Sulphate of Magnesia at same price if ordered as

EFFERVESCENT SALINE APERIENT.

RASPBERRY CITRATE.

Price 1/- lb.

A thoroughly satisfactory make of this now popular article.

ALSO:

LEMON CITRATE,

Price 1/- per lb.

LIME FRUIT CITRATE,

Price 1/- per lb.

DESCRIPTIVE LABELS (without name), 8d. per 100.

T. & H. SMITH & CO.,

EDINBURGH AND LONDON,

Are the **ONLY MANUFACTURERS** of the

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To whom, at the **UNIVERSAL EXHIBITION**, in **PARIS, 1878**, the **GOLD MEDAL WAS AWARDED.**

NEW YORK Office—20 Cedar Street: **FRA^S. JA^S. MACNAUGHTAN**, Agent. [2]

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B. HOOPER & CO.

Beg to announce the **REMOVAL** of their **WHOLESALE DEPARTMENT**
from **43 KING WILLIAM STREET, E.C.**, to larger and
more commodious Premises at

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These Premises

have been specially fitted

by **B. HOOPER & CO.** with an
improved installation of Machinery, &c.,

to meet the increasing demand for their

Specialities. To prevent delay we respectfully ask
our clients to see that all Wholesale orders are sent direct
to our new address.

A NEW PRICE LIST WILL SHORTLY BE ISSUED.

SPECIALITIES.

Compressed Pellets.

Chlorate of Potash, Potash and Borax, Soda
Carb., Potash Bicarb., Antipyrin, Sulphonal.
Cascara, Antifebrin, Phenacetin, Saccharin, &c.
These are supplied either in bulk or in flat tin
boxes or bottles, convenient for the waistcoat pocket,
prettily labelled, and in neat outers.

Capsules, Flexible, Hard, and Perles.

Copaiba, Copaiba and Sandal Oil, Sandal Oil, Castor Oil, Ood
Liver Oil, Terebene, Cascara, Male Fern, and numerous
others. Amyl Nitrite, &c., in glass.

French Perles.

Drugs and Chemicals Compressed or Capsuled
to Customer's order.

We print Chemist's Name and Address
on these without any charge, and
after the first order hold stock,
so that no delay can take
place in execution of
order.

SPECIALITIES.

Hooper's Cachous.

The first introduced and still the recog-
nised superior of any Cachous in the market.
Prepared by us from the form used for nearly
40 years.

Hooper's Fumigating Pastilles.

Supplied in handsome boxes or in bulk.

Bougies, Pessaries, and Suppositories.

The attention of the Trade (Wholesale and Retail) is
called to these. Our Glycerine Suppositories for children
and adults are having a very large sale, and are put
up in a very superior style. Any forms pre-
pared to order.

Hypodermic Injections.

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We are Agents for the Sale of
these, which are strongly re-
commended as reliable,
stable, & unchangeable.
Special Lists on
application.

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OF PILLS & GRANULES

OF

BY

L. FRERE, 19 Rue Jacob, PARIS.

Received the only Gold Medal given to Pharmaceutical Products at the Paris Universal Exhibition, 1878.

Also awarded at the International Exhibitions of
Gold MELBOURNE, 1880; AMSTERDAM, 1883; SYDNEY, 1888; **Medals** PARIS, 1889.



The names and weights of the active substances are printed very clearly on each pill or granule. The object of an easily read inscription, such as this, is to obviate those errors which may so easily occur in handling ordinary granules. The seriousness of such mistakes is a direct consequence of the action of the substances employed. The inscription gives every security both to the invalid and the doctor. The process of manufacturing printed pills and granules makes it possible to obtain absolute homogeneous masses, in which the active principles are uniformly distributed and mathematically dosed. The covering is of a nature which preserves the most changeable medicaments, such as iodide of iron, in all climates. All our various pills and granules are further distinguished by the colour of their covering. The printing is done by means of lampblack, and the colouring matter employed for the coverings is entirely of a vegetable nature.

EXTRACT FROM PRICE LIST FRENCH PHARMACOPŒIA.

NAMES OF SUBSTANCES	Weights		Prices	NAMES OF SUBSTANCES	Weights		Prices	NAMES OF SUBSTANCES	Weights		Prices
	French Centigram	English Grains			French Centigram	English Grains			French Centigram	English Grains	
Amorphous Aconitina ..	1/2	1/120	8	Acetate of Morphia ..	1	1/6	1 3	Codeina	1	1/6	1 8
Crystallised Aconitina ..	1/10	1/600	8	Salicylic Acid	10	1 2/3	0 7	"	2 1/2	5/12	2 0
Arsenate of Soda	1	1/60	6	Aloes	10	1 2/3	0 7	"	5 1/2	5/6	2 10
Arsenate of Strychnia ..	1/2	1/120	8	"Anderson's" or				Ergotina	1	1/6	0 10
Bi-chloride of Hydrar-				"Scotch Pills"			0 6	"	5	5/6	0 10
gyrum	1	1/60	6	Benzoate of Lithina ..	1	1/6	0 8	"	10	1 2/3	0 10
Bi-iodide of Hydrar-				Bromhydrate of Quinina	5	5/6	1 3	"	15	2 1/2	0 10
gyrum	1	1/60	6	"	10	1 2/3	1 8	Extract of Belladonna ..	1	1/6	0 7
Colchicina	1/2	1/120	8	"	15	2 1/2	2 0				
Acetate of Morphia ..	1	1/60	7	"	20	3 1/3	2 6	Amorphous Quassina ..	1	1/6	0 8
Hydrochlorate of Morphia	1	1/60	8	Bromide of Camphor ..	1	1/6	0 7	"	2	1/3	0 10
Phosphoric Acid	1	1/60	8	"	5	5/6	0 8	Santonina	2	1/3	0 7
Phosphuret of Zinc ..	1	1/60	8	Caffeina	1	1/6	1 3	"	5	5/6	0 8
"	2	1/30	8	Calomelas	1	1/6	0 7	Sulphate of Quinina ..	5	5/6	1 3
"	4	1/15	8	"	5	5/6	0 7	"	10	1 2/3	1 8
Picrotoxina	1	1/60	8	Hydrochlorate of Quinina	5	5/6	1 3	"	15	2 1/2	2 0
Crystallised Quassina ..	1	1/60	8	"	10	1 2/3	1 8	"	20	3 1/3	2 5
Extract of Strophanthus	1	1/60	10	"	15	2 1/2	2 0	Sulphate of Sparteina ..	2 1/2	5/12	0 10
Sniphate of Strychnia ..	1	1/60	8								

The preceding list comprises only a very small portion of the Pills and Granules prepared by the Firm of L. Frère. Their complete Catalogue contains the various formulæ of the French Pharmacopœia, also the leading ones of the British Pharmacopœia, as follows:—

BRITISH PHARMACOPŒIA			PRICES			BRITISH PHARMACOPŒIA			PRICES		
			Per Gross	Per lb.	Per Bottle of 50 pills				Per Gross	Per lb.	Per Bottle of 50 pills
Aloes Barb.	P. B. gr. iv.	.. ..	s. d.	s. d.	d.	Ferri Carb.	P. B. or "Female Pill"	.. ..	s. d.	s. d.	d.
Aloes and Ferri	P. B.	.. ..	1 0	10 0	4	Blue Pill	P. B.	.. ..	1 0	8 0	4
Aloes and Myrrh.	P. B.	.. ..	1 2	10 4	5	Rhei Co.	P. B. or "Compound Rhubarb"	.. ..	1 0	10 0	4
Asafœtida Co.	P. B.	.. ..	1 7	12 0	6	Aperients	or "Antibilious Pill"	.. ..	1 4	12 0	5 1/2
Calomel Co.	P. B. or "Calomel Pill"	.. ..	1 4	10 4	5 1/2	Podophyllin	gr. 1/4 6,000 per lb.	.. ..	1 0	10 0	4
Colocynth Co.	P. B. or "Colocynth Pill"	.. ..	1 2	10 0	5	Acid. Arsenios	gr. 1/60	.. ..	1 2	20 0	5
Colocynth Co.	P. B. or "Colocynth Pill"	.. ..	1 8	16 0	6 1/2	Atropia	gr. 1/60	.. ..	1 0	10 0	4
Coloc. and Hyos.	P. B.	.. ..	1 7	13 0	6	Digitalin	gr. 1/60	.. ..	1 4	32 0	5
Ferri Iodid.	P. B. gr. iiii.	.. ..	1 8	16 0	6 1/2						

The above are the principal pills in daily use, and those P. B. are made in strict accordance with the formulæ of the British Pharmacopœia. In proportion with the demand, other kinds will be added to our list, at equally low prices.

NOTE.—Beyond the pills and granules mentioned in our price list, we manufacture to order any kind of pill or granule of which the formula may be confided to us, with whatever inscription the client may select. These special orders cannot be undertaken for a less quantity than two kilogrammes (4 lb. 7 oz.). It is also necessary to give (1) the colour selected for the covering, (2) the inscription written very distinctly. This lettering cannot occupy more than 18 European letters. The spaces between the words count as a letter. For the Hindoo languages the number of letters may vary according to the form of type. The price for manufacturing is 18 francs (14s. 4d.) per kilogramme (2 lb. 3 oz.) of pills covered. Our customers can have the raw materials sent to us by a wholesale drug house, or we will undertake to supply them. It is hardly necessary to add that an absolute discretion is guaranteed. The Granules comprise the doses of active principle for 1/2 milligramme, up to one centigramme exclusively. The Pills comprise all the other doses. Each bottle of Granules contains one hundred granules, viz.: 8 doz. 1/3. Each bottle of Pills contains fifty pills, viz.: 4 doz. 1/4.

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For producing Local Anæsthesia.
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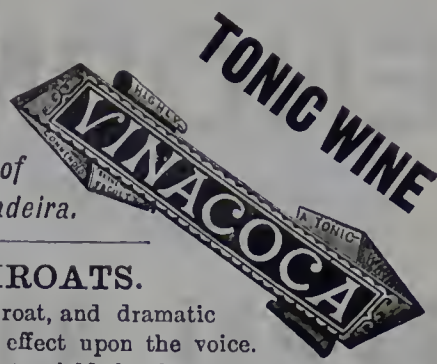
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The VINACOCA is carefully prepared from the best Coca Leaf only. (No addition of Cocaine.)

Medical men prescribe its use in preference to Quinine or any Bark Wine. It may be used with safety at all times, and for any length of time, without injury to the gastric membrane. It may be taken in place of Liquors and Dessert Wines, which it certainly surpasses in flavour. *It is a direct stimulant of the most active kind*, supporting life in a manner almost miraculous, without disturbance of the vital functions. For the voice, a wineglassful before any ordeal is sufficient. Its effect upon the vocal cords is surprising, and of great value to Public Speakers, Professional and other Singers, and Lecturers.

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Antiseptic Dressings and Absorbents, Bandages
Oiled Silk and Muslin, and Surgical Dressings
of every description.

Supplies may be obtained through any Wholesale Druggists and Dealers in
Surgical Appliances, or from the Proprietors,

SEABURY & JOHNSON,

48 Jewin Street, London, E.C.,

NEW YORK & HAMBURG. [2]

Trade Mark.



Registered.

THE
ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,
12 PAUL MALL EAST, LONDON, S.W.

SOLE AGENTS FOR DR. WARLDMONT'S CALF VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.

HUMAN VACCINE, from healthy children only, microscopically examined and
source quoted. Tubes, two-thirds full, 1s. 8d. each; Tubes one-third full and Lan-
cet-charged points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small
Points, 5s. Tubes, two-thirds full (same as those mentioned above, but without
source), in quantities for export, 25 per 100 Tubes. Pin-points uncharged, 1s. per
dozen. Vaccine Ejectors, 1s. 8d. each, including postage. Vaccinations by appoint-
ment. P.O.O.'s (including postage, and crossed London and Westminster Bank)
with orders, payable to
Office hours, 10 to 4. Saturdays 10 to 2.
EDWARD DARKE Secretary.

HOPGOOD & CO'S

HAIR

NUTRITIVE & SEDATIVE

CREAM

The only preparation for the Hair
recommended by leading Physicians
for the removal of Scurf, allaying
irritation, preventing greyness and
baldness, and producing a

LUXURIANT HEAD OF HAIR.

In Bottles to retail at 1s. 6d., 2s., 2s. 8d., 3s. 6d., 5s.
Revised Wholesale Prices, 12s. 6d., 16s. 6d., 20s., 30s., and 42s. per dozen.
Supplied by all Wholesale Sundry Houses,
OR FROM THE DEPOT—

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POMIES'
OPHTHALMIC
POWDERS
AND
MEDICINES.



OPHTHALMIC
INSTITUTION &
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32
EUSTON SQUARE
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**POMIES' OPHTHALMIC POWDER
AND MEDICINES.**

For the rapid cure of diseases
of the Eye without operation.

ALL CHEMISTS SHOULD KEEP IT.

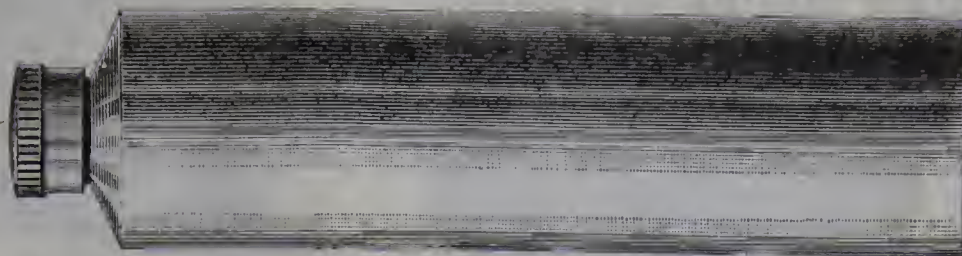
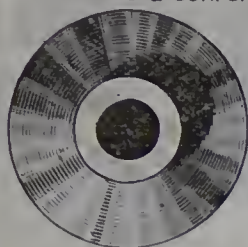
PRICE LIST SENT ON DEMAND.

New method of curing diseases of the Eye
without operation, by E. POMIES, Oculist,
late Surgeon in the French Army, &c., sent on
demand to all Chemists for distribution.

Sold by Wholesale Agents in London.

METALLIC COLLAPSIBLE TUBES FOR PAINTS,

Perfumes, Shaving Creams, Soaps, Oils, and all Fluid or Semi-Fluid Substances.
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[3]

ESTABLISHED 1820

BUNTER'S PREPARATIONS FOR THE TEETH

Are the PUREST, SAFEST, and BEST that can be used, containing nothing of a deleterious nature. They are strongly recommended by Drs. E. Smith, M.R.C.S., Prof. W. Wilson, M.D., Gordon Stables, M.D., R.N., Geo. H. Jones, D.D.S., F.R.S.L., F.R.M.S., &c., Andrew Wilson, M.D., F.R.S.E., &c., &c., J. Hounsell, F.R.C.S., and many others.

BUNTER'S NERVINE FOR TOOTHACHE, gives permanent relief by Painless constriction of the Nerve in Decayed Teeth, forms a Stopping, arrests Decay, saves Extraction, Sleepless Nights prevented, Neuralgic Headaches and all Nerve Pains relieved. As a NERVE TONIC it gives strength to the nervous system, invigorates the entire frame, affording relief and effecting a cure in many complaints over which the nerves exert control. Invented by G. B. BUNTER, Surgeon Dentist, Maidstone. Price 1s. 1½d. and 2s. 9d.

PURILINE TOOTH WASH for the TEETH, GUMS, and BREATH. A pure, perfect, and refreshing Fluid Dentifrice. A few drops in water used daily will thoroughly Cleanse, Beautify, and Preserve the Teeth, polish the Enamel, prevent Tartar, destroy all living "Animalculæ." It is Absolutely Pure and Harmless to the youngest child or most delicate constitution. Used as a Tooth Wash after each meal will keep the mouth in a delicious condition of comfort, health, purity, and sweetness, for ever. 1s. and 2s. 6d.

BUNTER'S DENTINE, a Permanent Stopping for Decayed Teeth. One can easily prepare and place it in the cavity of the Tooth in a soft state, and in a short time it becomes a perfectly hard and white Enamel, forming, as it were, a part of the original substance of the Tooth. Price 1s. 6d.

PURILINE TOOTH POLISH, a pure and perfect article for Cleansing the Teeth, Hardening the Gums, and Perfuming the Breath. Will Purify and Beautify the Teeth with a Pearly Whiteness, polish the Enamel, prevent Tartar, and destroy all living Germs (Animal or Vegetable), which are the most powerful source of decay to all Teeth. It is not a Powder or Soft Paste that will scatter over clothing and soil the toilet: it is a Dental Paste of stiff consistency, non-gritty, and Absolutely Pure and Harmless to use. It is neatly put up, forming a sightly Toilet Article, or may be carried in the pocket in any climate of the world, without injury or losing its virtues. Price 1s.

Proprietor—A. WILSON, 422 CLAPHAM ROAD, LONDON, S.W.

SALVINE.

THE SCIENTIFIC DENTIFRICE.

OF ALL WHOLESALE
HOUSES.

This Preparation has been especially designed by an eminent London Dental Surgeon, after a long series of careful experiments, to Prevent Decay of the Teeth in addition to beautifying them.

SALVINE is the only Dentifrice that is an Ant-Acid and Anti-Parasitic. Put up in a novel and attractive manner. Price 1/6, and 2/6.

LIBERAL TERMS.

A handsome, valuable Showcard of an exceedingly tasteful and high-class design, now ready. Trans, arrencis and other attractive Advertising matter.

SALVINE DEPÔT, 3 Oxford St., LONDON, W.

Matchless for the Teeth, Gums, and Breath.

Dr. W. ZIEMER'S
most efficacious



"THE ALEXANDRA"

DENTIFRICE.

It Preserves, Beautifies and renders the Teeth perfectly White without injuring the enamel. It Strengthens the Gums. It is most Agreeable as a Mouth-wash, and sweetens the Breath. It is Invaluable to Smokers. Prices: 13 size, 9; 2 size, 15; 36 size, 24 per dozen.

Sole Proprietors: B. W. ZIEMER & CO., 143 Cannon Street, London, E.C.

Sold by all
Wholesale Houses.



REGISTERED

PARIS EXHIBITION, 1889.

PRIZE MEDAL AWARDED TO



"SALVO PETROLIA"

(VASELINE).

Absolutely Genuine Paraffinum Molle of the very Purest Form, and we claim that it is superior to Vaseline.

Packed in Tins, 1, 4, 10, 14, 28, 56, and 112 lbs.

"OLEUM DEELINÆ"

(REGISTERED).

Universally adopted by the Medical Profession
FOR

OPHTHALMIA, SCURVY, RINGWORM,
ECZEMA, SKIN DISEASES,

FOR
EXTERNAL & INTERNAL IRRITATION
OF EVERY KIND.

PACKED IN CASES—

One Doz. 1s. 6d. Bottles; One Doz. 2s. 6d. Bottles
or half of each.

TESTIMONIALS MAY BE HAD UPON APPLICATION.

"EDIBLE SALVO PETROLIA"

For Public Speakers, Actors, & Singers.
1s. 6d. per Tube.

The above are Manufactured Solely by the Proprietors,

THE DEE OIL COMPANY, LIMITED.

Works—SALTNEY, CHESTER.

OFFICES:

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Liverpool, Dublin, Manchester, Glasgow, Hull, Cardiff,
Bristol, Belfast, Barrow-in-Furness, Nottingham,
Paris, Hamburg, &c.

TRY IT!

NONIT OIL.



A new nursery toilet preparation, neatly put up, agreeably perfumed, thoroughly effective.

SHOW IT!

NONIT OIL goes freely, and in many districts is becoming one of the most saleable articles chemists can stock.

SELL IT!

Bottles, 6d. and 1s. each.

Intending dealers may have sample bottle post free 7d. stamps, 3 doz. 6d. trial lots, carriage paid, on receipt of P.O. 12s.

EDWIN FOWLER, Chemist,
218 HESSLE ROAD, HULL.

NONIT OIL may be had through Lofthouse & Saltmer, Hull; Raimes & Co., York; Hirst & Brooke, Leeds; Evans, Sons & Co., Liverpool; R. Hovenden & Sons, London; F. Newbery & Son, London; J. Sanger & Sons, London; and most Wholesale Houses.

TRADE MARKS REGISTERED.

1st. "Fowler's Nonit Oil with device." 2nd. Fancy Word, "Nonit."

WRIGHT'S MYRRH TOOTH SOAP.

8- PER DOZEN.

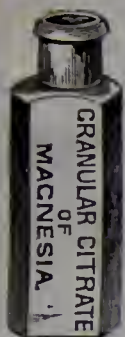


The Most Elegant Dentifrice on the Market. Removes Tartar, Preserves the Enamel, Prevents Decay, Gives Pearly White Teeth, Hardens and Strengthens the Gums, Cures Offensive Breath, a Gem for the Toilet.

Put up in an attractive manner for show case-display, and contains in a modified form the medicinal properties of Myrrh. It is an elegant saponaceous Dentifrice, absolutely pure, containing no mineral or acid substance, and no ingredient entering into its composition is in the least degree harmful or unwholesome.

CAN BE OBTAINED OF

H. A. GOODALL & CO.
Bartlett Buildings, Holborn Circus, LONDON, E.C.



GLASS BOTTLES

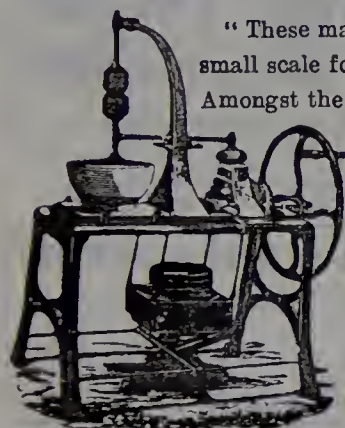
OF THE
BEST QUALITY.

DISPENSING, PICKLE, SAUCE, OIL,
MINERAL WATERS, &c., &c.
SAMPLES AND PRICES ON APPLICATION.

E. YOULDON,
EAST LONDON GLASS BOTTLE WAREHOUSE
36 to 40 Great Garden Street, Whitechapel,
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GOODALL'S PATENT GRINDING & LEVIGATING MACHINES.

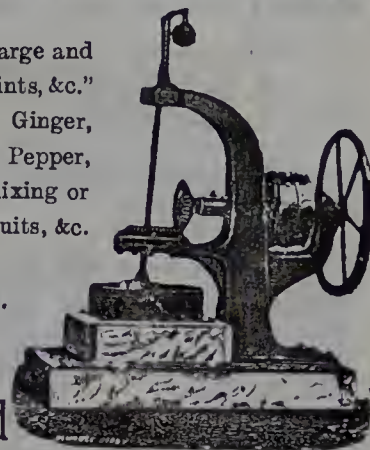


"These machines have for many years proved most serviceable on a large and small scale for Grinding, Levigating, and Mixing Powders, Pill Masses, Paints, &c." Amongst the articles which are readily ground by it may be mentioned Ginger, Seeds, Salts of all kinds, Cream of Tartar, Sugar, Cocoa, Pepper, Spice, Jalap, Rhubarb, Gums, Aloes, Barks, &c.; and for mixing or kneading Lozenges, Pill Masses, Glaziers' Putty, Bread, Biscuits, &c.

ILLUSTRATED PRICE LIST, with full particulars, sent free.

Prices from £8 10s. to £60.

E. F. GOODALL, Barton-under-Needwood



Sole Licensees for Manufacture and Sale of McFerran's Improved Automatic Machinery for Making

COMPRESSED TABLETS

Of various shapes and sizes, from 1 gr. upwards. Experts sent to fix and start Machines. Write for particulars and prices. CAPSULES FOR MOULD MAKING. Machines Manufactured to Contract for Inventors & Merchants.

JOHN HOLROYD & CO., LTD.

Engineers, Tool Makers, and Machinists,
TOMLINSON STREET WORKS,

HULME, MANCHESTER.

GARDNER'S

PATENT COMBINED

'RAPID' SIFTER & MIXER,

Reduces lumpy powders, sifts and mixes faster, and makes a more perfect blend than any Machine in the Market.

Send for full particulars to

WM. GARDNER,
ENGINEER, &c.,
GLOUCESTER.



FOR HAND OR POWER. Capacities, from 15 to 300 lbs. at one mixing.

DISPENSING BOTTLES & PHIALS

GREAT SAVING in the purchase of the above by taking not less than 6 gross of assorted sizes:—

	Per Gross.		Per Gross
3 & 4 oz., Plain or Graduated	7/6	1-oz. Phials ..	3/6
6 & 8 oz. " "	8/6	1-oz. " ..	3/9
12-oz. " "	12/-	1 1/2-oz. " ..	4/3
		2-oz. " ..	5/3

Country packages, 1/ each, allowed for if returned. All other sizes and kinds equally low.

I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS.

25 Francis St, Tottenham Court Road **LONDON.**
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BANKERS: LONDON AND WESTMINSTER BANK.

ESTABLISHED UPWARDS OF 50 YEARS.

MANUFACTORY.

"Eclipse" Glass Works,
Lea Bridge, Clapton, London, E.

Prize Medal, Adelaide Exhibition, 1887.
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OFFICES AND WAREHOUSES:

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E. A. HEARN & CO.

WHOLESALE AND EXPORT GLASS BOTTLE MANUFACTURERS.

Makers of EVERY DESCRIPTION of Glass Bottles, either PLAIN or STOPPERED, in

WHITE FLINT, AMBER, BLUE, MEDICAL GREEN, ACTINIC GREEN, &c., &c.
OR ANY COLOUR MADE TO ORDER.

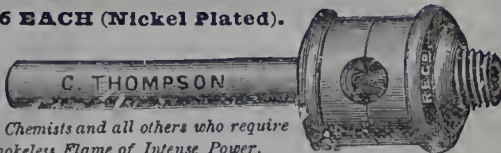
FEEDING BOTTLES IN ALL SHAPES,
PLAIN NECKS OR SCREW STOPPERED.
SPECIALITY.—First-class Quality at Reasonable Prices.



CHAS. THOMPSON'S ATMOSPHERIC GAS JET.

PRICE 1/6 EACH (Nickel Plated).

REGISTERED
No. 147859.



For the use of Chemists and all others who require
a Small Smokeless Flame of Intense Power.

EXCLUDE AIR.—An ordinary ILLUMINATING FLAME is obtained.
ADMIT AIR.—For Sealing Wax purposes this BUNSEN FLAME is most useful;
the impression produced from a seal is a far better colour than it is possible to pro-
duce with an ordinary gas-jet.
ADMIT FULL QUANTITY OF AIR.—For Soldering purposes this powerful
BLOWPIPE FLAME is invaluable to Jewellers, Dentists, and others.

Small Nickel-Plated Taps to fit the above Jets, 1/- each.

Registered Gas Bracket, as shown on page 133 in the summer number, 7/6 each
complete, Nickel-plated. Write for descriptive circular.

AGENTS.—Maw, Son & Thompson, Bourne, Johnson & Latimer, Evans, Lescher &
Webb, London. Southall Bros. & Barclay, Birmingham. Evans Sons & Co.
Liverpool. Raimes, Clark & Co., Edinburgh. Glasgow Apothecaries Co., Glasgow.
Bolieu & Boyd, Dublin; and other Wholesale Druggists and Sundrymen; or
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CHAS. THOMPSON, Pharm. Chemist, Sparkbrook, Birmingham.

On receipt of Postal Order or Stamps.

PURE TARTAR EMETIC.

PURE OXIDE OF ANTIMONY.

Showing 98 per cent. of anhydrous Sb_2O_3 .

This product is obtained BY A NEW PROCESS, and
is offered at VERY ADVANTAGEOUS PRICES.

POULENC FRÈRES,

92 Rue Vieille du Temple, PARIS.

Grand Prize, Universal Exhibition, Paris, 1889.

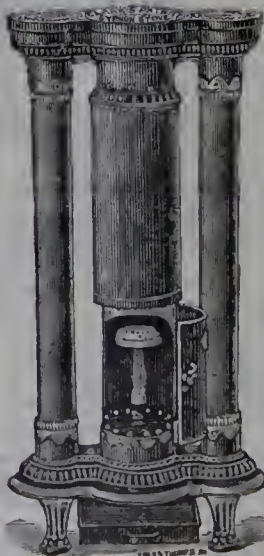
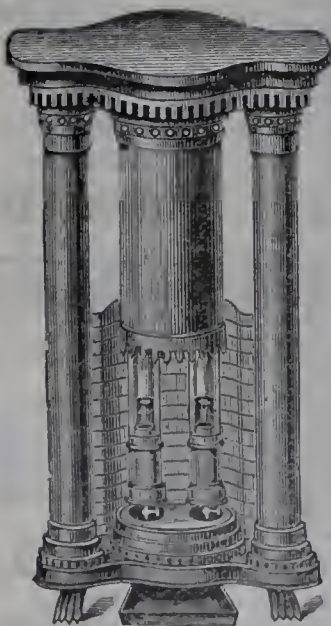
TO CHEMISTS AND DRUGGISTS.

AGENTS WANTED FOR THE SALE OF CLARK'S PATENT

"SYPHON" (REGISTERED TITLE) HYGIENIC CONDENSING GAS HEATING-STOVES.

NO FLUE REQUIRED. ARE FREE FROM SMELL OR SMOKE.

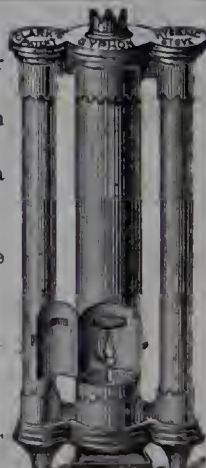
All injurious vapours are reduced to harmless liquid inside the Stove, and passed
out at foot into a tray provided for that purpose.



For Use in Hospitals, Sick
Chambers, Bedrooms, Halls, Con-
servatories, Churches, Schools, &c.

Specially
suitable for
patients
suffering from
Bronchial
affections, as a
moist
atmosphere
is obtainable
when
required.

For Terms,
Particulars,
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S. CLARK & CO., Patentees and Makers, Syphon Works, Park Street, ISLINGTON, LONDON, N.

Telegraphic Address—"SYPHON STOVES LONDON."

Wholesale Agents—Messrs. MAW, SON & THOMPSON, Aldersgate Street, London, E.O.

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We wish to draw the attention of Chemists to the excellence of the spirit we supply for pharmaceutical purposes. We have devoted great care and attention to this branch and have made it a leading line. That our efforts in this direction have been appreciated is proved by the number of *unsolicited* testimonials we have received from nearly every town in the country, of which the following is a specimen:—

GENTLEMEN.—

Please send 5 gall. 56 o.p. as before. I have pleasure in saying I have always found your spirit answer all tests, which is more than I can say of all I have had from different places, and also to be practically free from odour.

Messrs. Stephen Smith & Co.

The Pharmacy, Morecambe.

Yours faithfully, JOSH. N. CULTS, B.Sc., F.C.S.

In consequence of the increase in the spirit duty our prices will be—

S.V.R. 56 o.p. ... 19s. 3d.

Double Distilled, 56 o.p. ... 19s. 7d.

CASH WITH ORDER. REDUCTIONS FOR QUANTITIES.

SPECIALITY FOR PERFUMERY.

This pure grain spirit, which has been thrice rectified and filtered through charcoal, is being largely used in making high-class perfumes.

Price, 19 10, 56 o.p.; 20 4, 60 o.p. Cash with Order. Reductions for Quantities.

STEPHEN SMITH & CO., BOW, LONDON, E.

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SPECIAL TERMS TO LARGE BUYERS.

CASH
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49 CLERKENWELL
ROAD, LONDON, E.C.

THE

CHEAPEST HOUSE

FOR METHYLATED SPIRIT

TREBLY DISTILLED BY OURSELVES.

PERFECTLY PURE.

FIT FOR ANY
PURPOSE.

ST. ANDREW'S
DISTILLERY,



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0/64 2/3

Jars, 2-gallon, 2/6; 3-gallon, 3/; 4-gallon, 4/.
Drums, 5-gallon, 3/6; 6-gallon, 4/; 10-gallon, 6/.

PETROLEUM JELLY

WHITE, RED, and YELLOW—Best and Purest.

Consistency suitable for all Climates, and pronounced by the MEDICAL PROFESSION to be UNSURPASSED. Tins of all sizes, from 1 to 10 lbs.; Iron or Wood Kegs, 1/2, 1, and 1 cwt; Barrels about 3 cwt., &c. Samples and prices on application, stating packages and quantities required, to the Manufacturers—

SNOWDON, SONS & CO, STEPNEY, LONDON, E.

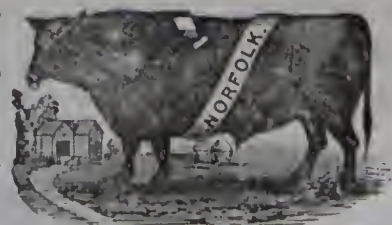
TO RETAILERS OF HORSE AND CATTLE MEDICINES.

THE "NORFOLK" CONDITION DRENCHES, for Cows, Fatting Bullocks, Sheep, and Pigs
Retail .. 1/2 doz. cases, 4/6; 1 doz., 9/-; 3 doz., 22/6
Wholesale .. 3/3; 6/6; 17/6
THE "NORFOLK" CORDIALINE or PAIN KILLER, for Horses, Neat Stock, Sheep and Lambs
Retail .. 1/2 doz. cases, 6/-; 1 doz., 12/-; 3 doz., 31/6
Wholesale .. 4/-; 8/-; 24/-

With usual cash discounts at all London Medicine Houses.

F. SUTTON & CO., NORWICH are now advertising these celebrated Preparations in the leading agricultural papers, and they are in constant use on the Royal Farms and by noted Breeders all over the kingdom, and especially by more than 3,000 Cowkeepers in Great Britain and Ireland. When once used they are sure to be adopted, as there are no similar preparations equal to them in the market.

HANDSOME SHOW CARDS SUPPLIED.



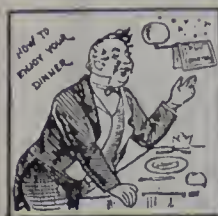
**JAMES
BURROUGH,** **S V R**
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CALE ST., CHELSEA, S.W.

and Methylated Spirit

AT LOWEST PRICES.

WRITE FOR QUOTATIONS.



PROTECTED BY LETTERS PATENT.

"Catch more Flies in a day, than the old fashioned papers do in a week."

THE "FLY CEMETERY"

Free from Poison. Annual sale millions. Liberal Terms.

Manufacturers, TUNBRIDGE & WRIGHT, Reading.



"Will you walk into my parlour?" said the spider to the fly.

"Will you buried be and sweetened in our honey eemet'ry?"

Saith TUNBRIDGE WRIGHT, of Reading, as they hang their patent sticker,
Where the flies do congregate when the summer's coming quicker.

Then the flies they came and stayed upon this the "stickiest sticker"

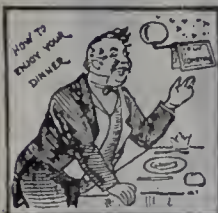
That ever man invented as a trap to trap 'em thicker;

And the fly-distracted sufferer joyed most exultingly

As he watched the growing numbers in the house-fly cemet'ree.

A SPLENDID TESTIMONIAL.

An old lady went into the shop of one of the chemists at Buxton and asked for some fly-papers. She said she wanted the old-fashioned kind, not the sticky ones, they got filled up so quickly; she wanted some that would last longer.



PROTECTED BY LETTERS PATENT.

"Catch more Flies in a day, than the old fashioned papers do in a week."

THE "FLY CEMETERY"

Free from Poison. Annual sale millions. Liberal Terms.

Manufacturers, TUNBRIDGE & WRIGHT, Reading.



THE EXACT WEIGHT OF A FLY.

James Spencer, a grocer, being greatly troubled by flies, put twenty-one sheets of sticky fly-papers about his store. In the evening he gathered them up, and noticed how much heavier they were, being covered with flies. He weighed the twenty-one sheets, and found they weighed seven pounds. Then he put twenty-one fresh sheets on the scales, and they weighed four pounds four ounces. Thus the flies weighed two pounds twelve ounces. He found that there were twenty flies to each square inch of the fly-paper; each sheet had 336 square inches, and 6,720 flies, and the twenty-one sheets had 141,120 flies. Thus one may ascertain the weight of a fly; for if 141,120 flies weigh two pounds twelve ounces, it is easy to calculate what one will weigh.



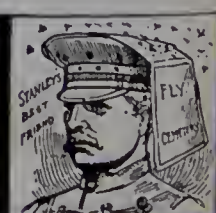
PROTECTED BY LETTERS PATENT.

"Catch more Flies in a day, than the old fashioned papers do in a week."

THE "FLY CEMETERY"

Free from Poison. Annual sale millions. Liberal Terms.

Manufacturers, TUNBRIDGE & WRIGHT, Reading.



TO THE
CHEMISTS & DRUGGISTS
OF
GREAT BRITAIN.

TELEGRAPHIC ADDRESS: *St. George's, Middle St*
COLEMAN, *NORWICH,*
GEORGE'S, NORWICH. *December, 1887.*

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE**. Your orders will oblige either direct or through the Wholesale Houses.

Yours obediently,

COLEMAN & CO., LIMITED.

*N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.
Trade prices on application.*

P.S.—Where the Magistrate's Certificate is not held we are willing to pay the entire cost of a Retail Certificate (the holder of which can sell any kind of Wines) if an assorted order of 6 dozen is sent us of any of our preparations. List on application. Our Liebig's Extract of Meat and Malt Wine **WITHOUT QUININE** commands a very large sale, and is recommended by over one thousand medical men who have sent us testimonials in its favour.

SOLE MANUFACTURERS—

COLEMAN & CO., LIMITED,
ST. GEORGE'S NORWICH,
AND 3 NEW LONDON STREET, LONDON, E.C.

To the Drug Trade! An important addition to Pharmacy from India, called "**SAPONARIA**."
The most wonderful Pharmaceutical novelty for Chemists to bottle as a speciality, or to mix with other preparations!
SAPONARIA is made in 2 qualities, No. I. for internal, and No. II. for external use.
SAPONARIA No. I. Is used in Tooth Washes and Tinctures, and renders them saponaceous, cleansing, and antiseptic.
Is used for producing a creamy head on Syrups, Essences, and Tinctures in connection with Astringent Waters and Fermented Beverages.
Is used for emulsifying fats and oils.
SAPONARIA No. II. Is used in eczema and similar skin-diseases.
Is used for washing the head, rendering the hair silky, and cleanses the head to perfection.
Is used as an Insecticide and as a Nit Lotion.
Is used in veterinary practice—cures mange in dogs and horses.
Is used for washing dogs—kills all the fleas, and maintains the skin in good order.
Is used for washing silk, and does not injure its pristine beauty.
Is used for cleaning carpets, better than any soap or benzoline.
Is used for cleaning furniture, and is better than polish.
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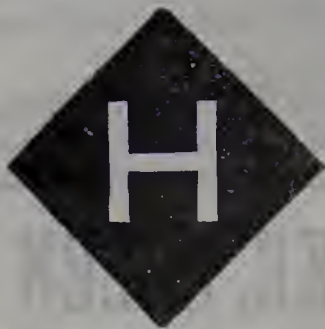
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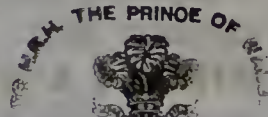
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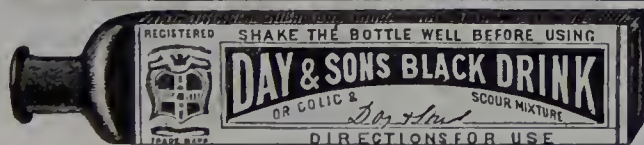
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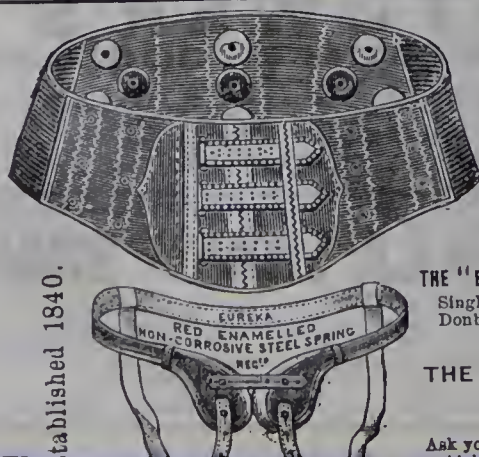
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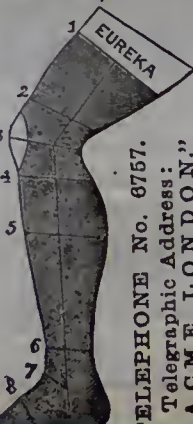
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